WEST MARKETING ISSUE
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Politics Cloud Aid Program in 85th Congress

Much Pressure Bears On Congressmen as New Session Begins

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON — National lawmakers began sessions of the 85th Congress last week under confused and conflicting conditions of a nature which do not make for mature deliberations of internal economic problems, particularly since this session, at least at the outset, will focus its attention on the critical international situation with defense problems preempting the center of the stage.

A further deterrent to constructive legislative action based on fact rather than political fancy is the condition that 1958 is a critical mid-term congressional election year wherein members of Congress color their voting judgments with an eye to the constituents back home. This attention to the home districts has been accelerated by the recent pay increases to members of Congress which tend to encourage opposition in primary campaigns, since these federal legislative jobs are financially attractive to those who see the salary level only and do not realize the costs involved in holding these so-called "plums."

Thus, first to be feared in this ses-

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Dominion Fertilizers To Build New Super Plant in Ontario

PORT MAITLAND, ONT. — Dominion Fertilizers, Ltd., a new firm, has announced through its general manager, Erol Baker, the details of what is described as "Canada's largest and most modern superphosphate plant," to be erected on a 22-acre site here.

Construction is expected to commence this month with completion by the beginning of the summer, enabling the plant to supply superphosphate for the next fertilizer season.

"The plant will be ideally and centrally located to supply not only Canada's needs, which are being imported to a large extent today, but also to supply areas in the U.S. bordering Lake Erie," Mr. Baker said.

The plant will be located at the mouth of the Grand River leading into Lake Erie. It will have all transportation facilities including direct rail service to its property, year round roads leading to main highways, and its own deep water wharfage, Mr. Baker said.

According to Mr. Baker, the capacity of the plant will be high enough to take care of not only the quantities presently imported into Canada, but also to supply Canada's future needs for its ever-growing use of the product. Superphosphate will be produced both in powdered and granulated form, he said. Plans of the company include the production of large quantities of wet process phosphoric acid and the production of the industrial chemical derivatives of phosphoric acid used in many industries.

USDA Strikes Back As Editorial Blasts Fire Ant Campaign

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON — A marked reaction in the U.S. Department of Agriculture and the pesticide industry has been noted following the publication of an editorial in the New York Times in which the USDA was pictured as acting in an irresponsible manner in its plan to eradicate the fire ant from areas in the South.

Comment from USDA spokesmen shows definitely that the department is not "Blithely plunging ahead" on the program, as the editorial said, without knowledge of what long-range damage may be done to fish and wildlife as well as to livestock. Nor is the program "rank folly" as the newspaper indicated, according to the USDA.

On the contrary, according to responsible USDA officials, the current fire ant campaign reflects the composite judgment of insect control officials of USDA and department of agriculture fish and wildlife representatives.

The editorial campaign against USDA's use of economic poisons to stamp out the fire ant charges that this poison is extremely harmful to fish, birds and animals. The USDA answer to this charge is that "domestic Tom cats are probably more harmful to birds than the overall effects of the economic poison now being used by USDA" in its campaign to eliminate the fire ant.

USDA officials comment that the editorial attack singles out one economic poison now being used as the villain in this campaign, but officials say that while this poison is being used, other economic poisons, less hazardous than the item selected for attack, are also being used.

The editorial singled out for emphasis selected control experiments wherein the feeding of animals and birds with doses of this toxicant reveals heavy mortality rates. However, USDA experiments show that no such conclusions are warranted and that there is no evidence to support any such conclusion.

USDA officials told Croplife that the control of the fire ant is by federally regulated use of these economic poisons through scientific administration. To permit the uneducated judgments of individual farmers who otherwise would go independently on their way to use such materials without supervision or guidance would be unwise. Under these conditions, abuse of use can readily and easily occur.

Responsible officials at USDA stoutly deny this assertion saying that they have had repeated conferences with conservation and zoological officials and representatives of the Department of Interior fish and wildlife service and have reached the conclusion that the overall merit of the present fire ant elimination campaign — while ad-

(Continued on page 20)

Rise in Anhydrous Output Noted by Bureau of Census

WASHINGTON—Production of anhydrous ammonia in the U.S. for the months of September and October, 1957, was considerably above that of 1956, according to a report just released by the Bureau of Census of the U.S. Department of Commerce. Output of synthetic NH_3 for October, 1957 was 322,557 tons as compared to 272,708 tons in 1956, the report said. September, 1957's output was 290,624 tons.

Fertilizer grade ammonium nitrate was produced at the rate of 211,716 tons in October, 1957, as compared to 137,766 tons in the same month of 1956. Output in September, 1957 was 187,289 tons.

Production of synthetic ammonium sulfate in October, 1957, was down from that of 1956 during the same month. The report shows 83,414 tons for October last year, and 94,745 tons for that month in 1956. September, 1957, saw 83,541 tons produced.

Production of lead arsenate went up a little in October as compared to September, 1957. The figures were 459 and 431 tons, respectively.

Nitric acid production was far ahead of 1956 figures, the report indicates. In October, 1957, the figure was 250,362 as compared to 193,472 tons in October, 1956. September, 1957's figure was 217,441.

Phosphoric acid from phosphate rock was made in the amount of 221,742 tons in October, 1957, as compared to 181,329 tons in the same month the year before. September, 1957 output was 211,112 tons.

Total production of sulfuric acid for October, 1957 was 1,433,050 tons, just slightly ahead of the 1,417,335 tons recorded for October, 1956. The output for September, 1957, was 1,347,705 tons.

S. N. FERTIG NAMED PRESIDENT

Northeastern Weed Conferees Hear Talk on Pesticide Laws

By GEORGE W. POTTS
Croplife Staff

NEW YORK—Dr. S. N. Fertig, extension agronomist, Cornell University, Ithaca, N.Y., was elected president of the Northeastern Weed Control Conference at the 12th annual meeting of the group at the Hotel New Yorker Jan. 8-10. He succeeds C. L. Hovey, Eastern States Farmers' Exchange, Inc., West Springfield, Mass.

Dr. L. Gordon Utter, manager, technical services, agricultural chemicals, Diamond Alkali Co., Painesville, Ohio, was named vice president, and D. A. Schallock, extension specialist, farm crops department, Rutgers University, New Brunswick, N.J., was reelected secretary-treasurer.

Despite a heavy snowfall hampering all travel facilities into the city, approximately 500 representatives from groups as far flung as Suffolk, Eng., and Palmer, Alaska, registered for the three-day meeting, which presented latest research and application developments in weed control.

The conference, an organization of technical experts from government, industry and education, heard papers ranging from weed control developments in farm crops to the impact of weed control on commercial and sport fishing and on public health.

Independent sessions featured discussions centered around agronomic crops, horticultural crops, forestry and industrial weed problems, public health and aquatics, with a total of more than 100 papers presented.

Jack Dreessen, herbicide specialist with the National Agricultural Chemical Assn., Washington, D.C., presented an address covering legislative and statutory limitations on the use of herbicides, as a feature of the opening session. In the talk he reviewed restrictions affecting finished products ready for sale to the farmer

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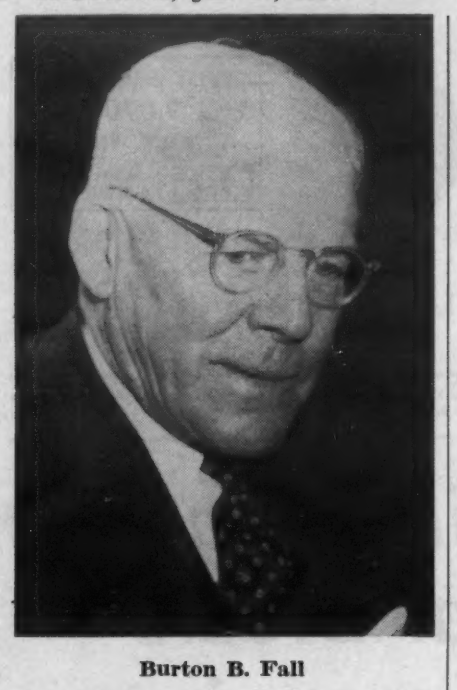

Burton B. Fall

Burton B. Fall, Vice President of Hubbard-Hall, Retires

WATERBURY, CONN. — The retirement on Dec. 31 of Burton B. Fall, senior vice president of the Hubbard-Hall Chemical Co. here, has been announced by the firm.

Mr. Fall was president of the Rogers & Hubbard Co. of Portland, Conn. at the time of its merger on Jan. 1, 1957 with three other fertilizer companies to form The Hubbard-Hall Chemical Co. He has been associated with the fertilizer industry for forty-three years. He had planned retirement a year ago, but on the insistence of the other members of the firm stayed on for an additional year to assist in the organization of the new company.

Mr. Fall served the Rogers & Hubbard Co. in practically all capacities. He started as a salesman in October, 1915, and subsequently was made assistant treasurer, treasurer, secretary and vice president, prior to assuming the presidency of the company in 1954. He was a member of the board of directors for thirty years.

Mr. Fall has been active in the fertilizer industry trade associations, and served for some years on the board of directors of the National Fertilizer Assn.

Mr. Fall will remain on the board of directors of Hubbard-Hall as well as the boards of the City Savings Bank in Middletown and the Rogers Manufacturing Co. of Rockfall, Conn.

Mr. and Mrs. Fall are fond of travel, and have made a number of trips abroad in the past few years. They expect to continue this activity, and are planning to spend the winter in Arizona.

Monsanto Establishes Three New District Sales Offices

ST. LOUIS—New district sales offices have been established by Monsanto Chemical Co.'s Organic Chemicals Division at Minneapolis, Pittsburgh, and Syracuse, N.Y., effective Jan. 1.

John L. Hammer, Jr., director of marketing for the division, said that the creation of the three new district sales office reflects Monsanto's expanding sales volume in those areas.

Arthur A. Hibbeler of Minneapolis, assistant district sales manager of the company's Chicago district sales office, has been appointed district sales manager at Minneapolis.

James D. Wright of Pittsburgh, resident salesman there for the company, has been appointed district sales manager at Pittsburgh.

Roy P. Sullivan, Jr., of DeWitt, N.Y., resident salesman at Syracuse for Monsanto, has been appointed district sales manager of the new Syracuse office.

The creation of the three new district sales offices brings to 16 the total number of such offices now marketing Monsanto's Organic Chemicals Division products. Seven of these 16 offices have been established within the past 10 years, according to Mr. Hammer.

Rio Grande Growers Show New Interest in Citrus Production

HARLINGEN, TEXAS — The recent disastrous freeze in Florida has stimulated new interest in citrus fruit production in this Lower Rio Grande area. Since the freeze of 1951, many citrus orchards have been abandoned or neglected.

During that time a water shortage has also contributed to the decline of a major industry that once employed 100,000 men and women during the main harvest season. From a peak of 27 million boxes of fruit before the 1951 freeze, the production has dropped to an estimated seven and a half million.

Many orchard owners who have been half-heartedly tending their trees are now cleaning them up and spraying for insects, according to Stanley Crockett, chairman of the Texas Citrus Advisory Committee of Harlingen.

Replanting has been substantial, Mr. Crockett says, with growers selecting trees and sites with better care. One thing being considered is the availability of underground water to supplement the inadequate supply from the Rio Grande River.

Mr. Crockett thinks that in 10 years the valley will regain its former status as a major citrus fruit area.

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Grace to Use River Barge Lines to Expand Terminal Facilities

MEMPHIS — The Grace Chemical Co., manufacturer of urea fertilizer, has revealed a plan for using Mississippi River Barge lines and terminals to give the company a wide warehousing system.

The first two barge loads of urea were moved by the company the latter part of December. Both loads were bound for the United Fruit Co. banana plantation in Central America via Federal Barge Lines to New Orleans and United's own ships to final port.

L. P. Massari, Grace export manager, said that the company will ship at least several tons this year in such a manner and that by 1959 shipments will treble or quadruple. The company is increasing its plant capacity here to double production, he said.

"We find the river is bringing shipping points closer to us dollar-wise," Mr. Massari said. "We will store urea in river terminal warehouses around the country in 500-ton lots for trucking directly as it is needed."

Ed N. Humphries, Grace traffic manager, said the fertilizer will be moved from the company warehouse near Memphis to the dock-side warehouse on President's Island by truck, then loaded onto barges.

"We feel this is an idea that other companies along the river will follow," Mr. Massari stated. "At first we plan to establish terminals at Pittsburgh, Minneapolis and Chicago, then possibly Kansas City. We may even establish a terminal in Canada. We will ship overseas by way of New Orleans."

Chemical Employment

SAN FRANCISCO—A fractional increase in California chemical employment during November from October brought the number of wage and salary workers in the industry up to the same level as the previous November.

The division of labor statistics and research of the California State Department of Industrial Relations estimated a total of 39,600 at work making various kinds of chemicals, as compared with 39,400 in October, and 39,600 in November of 1956. The figure was near if not at all-time highs for the industry. The production worker segment earned at the rate of $2.41 per hour on the average, a one cent increase from October and 13¢ above November the year before. Average weekly earnings were thus brought to $98.97, a gain from $94.45 twelve months before and from $98 06 in October.

OPENS NEW PEST SERVICE

NORFOLK, VA.—Planters Chemical Corp. has announced a new pest control division for insect control service in the area. In charge of the newly organized portion of the company is A. J. Kirby who has had some 23 years of experience in the pest control field.

W. Delmer Murphy, Jr.

W. Delmer Murphy, Jr. Joins DuPont Sales

WILMINGTON, DEL.—W. Delmer Murphy, Jr., has been assigned as sales representative for Du Pont nitrogen products in Michigan, Wisconsin, and the Chicago area.

Mr. Murphy will handle sales of "NuGreen" fertilizer compound, "Uramite" fertilizer compound, "Uramon" ammonia liquors, and "Two-Sixty-Two" feed compound to the fertilizer and feed industries.

A native of Illinois, Mr. Murphy was graduated from the University of Illinois in 1951, with a degree in general agriculture. He served in the Navy for three years during the Korean War. In 1955, he obtained his master's degree in agricultural economics from Michigan State University. He joined the Du Pont Polychemicals Department in 1956 as a market analyst.

Michigan Insecticide Meeting Set for Jan. 21-22

EAST LANSING, MICH. — The 1958 Michigan Insecticide-Fungicide Conference will be held at the Kellogg Center for Continuing Education, Michigan State University here Jan. 21-22.

The program will include:

A welcome by Dr. Lloyd Turk, director of the Michigan State Agricultural Experiment Station; a panel on nematodes; a report on weed control; an explanation of the 1958 vegetable calendar; a panel on vegetable diseases and insects.

Also, a report on fruit pesticide research, a talk about the poison control center, the 1958 fruit calendar and reports by district horticulture agents.

Control Found for Blackeye Bean Pests

BERKELEY, CAL.—University of California scientists have found a weapon to help control the two worst pests of the state's $4,000,000 blackeye bean industry.

Their studies indicate that yields of blackeye beans in fields severely infested by rootknot nematode and Fusarium wilt can be tripled if growers fumigate for nematode control alone.

Test treatments increased output of fields badly hit by both organisms from about 600 to 1,800 lb. per acre—enough to pay treatment costs eight times over.

Fumigation reduces nematodes and simultaneously cuts wilt symptoms by 30%, according to Ivan J. Thomason, assistant nematologist, and Donald C. Erwin, assistant plant pathologist. They found the nematode hastens damage from wilt—possibly by opening bean roots for fungus penetration or by reducing their resistance.

Greater Market for Pesticide-Fertilizer Mixtures Predicted by Virginia Official

RICHMOND, VA.—That a greater market may exist in 1958 for fertilizer-pesticide mixtures has been predicted by Rodney C. Berry, of the Virginia State Department of Agriculture, and director of its division of chemistry and foods. In commenting on the over-all situation, Mr. Berry says: "There is a definite indication in Virginia that there will be more demand for fertilizer-pesticide mixtures.

"We are now using these mixtures to control the Southern corn rootworm attacking peanuts and the Southern corn rootworm, seed corn maggot and wireworms attacking corn," he says. "There is considerable demand now for a mixture consisting of fertilizer and heptachlor to control the alfalfa weevil on alfalfa. There is also some demand for a mixture to control the green June beetle on legume crops.

"The demand for these two mixtures has preceded recommendations for their use by the Agricultural Experiment Station and permission for registration and distribution is not granted until recommendations are made. This means that there is considerable interest for the mixtures among farmers because of application convenience and the anticipated pest control. The experiment station has conducted research work, but it has been quite difficult, with the rapid advance of these mixtures, to stay abreast with developments in industry and approve mixtures on the basis of experimental evidence.

"For several years Virginia has permitted aldrin or heptachlor in certain fertilizer grades for use on corn and peanuts. The tonnage sold has not been significant as compared to the total tonnage of fertilizer sold in the state, but of the approximately five thousand tons sold in 1956-57, a large percentage represented aldrin in 0-10-20 or 2-12-12 for peanuts and 5-10-10 or 10-10-10 for corn.

"The control of these mixtures in Virginia has been more rigid than in many states, but progress toward eliminating opposition to such mixtures by the fertilizer industry and public acceptance of the mixtures have been greatly enhanced by the decision to require compliance with registration and labeling requirements of the Virginia Fertilizer Law and the Virginia Economic Poison Law. Labeling was cleared with Federal authorities for interstate shipments and considerable work was done in the state laboratories to assist the industry with mixing problems and to assure the consumer that such mixtures would be mixed properly and contain the proper quantity of fertilizer and pesticide.

"There is no reason to expect fertilizer-pesticide mixtures to decrease in sale, because with approval by Agricultural Experiment Stations and registration by state control officials there will be more combinations of these mixtures to control insects on numerous crops. The farmer is constantly seeking ways to cut cost to a minimum, so if this product can be purchased and applied as a mixture at less cost than the purchase and application of separate materials, the farmer will constantly demand and industry will supply additional fertilizer-pesticide mixtures.

"There is also the matter of convenience, which cannot be discounted, because in many instances we pay more for the convenience of using a product, when we could cut cost through the use of separate materials. Therefore, whether it be a matter of cutting cost of operation or paying for convenience, the future will show considerable increase in the sale and distribution of these mixtures. Many fertilizer manufacturers who have opposed permitting such mixtures will find it necessary to develop methods for mixing and selling them to meet competition.

"There is considerable less opposition from industry in this area and we believe more aceptance will be noted with experience in manufacture and distribution of additional fertilizer-pesticide combinations."

California Cattlemen To Finance Weed Control

FRESNO, CAL.—California cattlemen want to go after all poisonous and "objectionable" plants plaguing their range lands, and accordingly have resolved to provide by one means or another "sufficient funds . . . to speed up the research work on economic means of eradication." Money raised by the California Cattlemen's Assn. would be given to the College of Agriculture or the School of Veterinary Medicine of the University of California.

A resolution on the subject was passed at the recent convention of the CCA held at Fresno. In a companion resolution, the cattlemen recommended the development of a "comprehensive plan" for the control and eradication of weeds, including effective use of chemical weed killers. Reelected as president of the association was Robert Johnson.

FLORIDA TONNAGE

TALLAHASSEE, FLA. — Florida fertilizer consumption during November totaled 203,480 tons, according to the Florida Department of Agriculture. This included 147,366 tons of mixed goods and 56,114 tons of materials.

New Mexico Pesticide Conference Scheduled

STATE COLLEGE, N.M.—Industry leaders will discuss general and technical topics at the New Mexico Pesticide Conference here Feb. 6-7. They will include Ivor Burden, vice president, United Heckathorn, Richmond, Cal.; Gale F. Hansen, director, Aerial Agricultural Activities, National Aviation Trades Assn., Richmond, Cal., and R. L. Horst, chief, Denver District, Food and Drug Administration, U.S. Department of Health, Education and Welfare.

The conference, to be held in Milton Hall on the A&M Campus here, is open to farmers, ranchers, retail and wholesale dealers, manufacturers' representatives, applicators, and others interested in the latest developments in the farm chemicals field. Dr. J. Gordon Watts, chairman of A&M's botany and entomology department, will be in charge of the program.

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Colorado Faces Severe Grasshopper Infestation in 1958

DENVER—Colorado faces a severe grasshopper plague in 1958, according to surveys made by the State Department of Agriculture. A total of more than 2.8 million acres of grass and cropland is threatened, with the infestation rating severe or very severe in much of the area, the surveys show.

Surveys made by the department in cooperation with federal and extension service entomologists show that 1,429,000 range acres may be involved, and 1,384,500 cropland acres.

A "very severe" threat exists in southwestern El Paso, northwestern Pueblo and eastern Fremont counties.

The infestation is "severe" in Logan, Sedgwick, Washington, northwest Kit Carson, northeast Lincoln, central Weld and western edge of Yuma counties.

Considerable 'hopper damage already was caused last fall at the perimeters of winter wheat fields in northeastern Colorado.

W. G. Wysor Retires From Southern States

RICHMOND, VA.—W. G. Wysor, management counsel for Southern States Cooperative since 1948, has retired. He has been with the organization 35 years. Mr. Wysor was active in the founding of the cooperative in 1923 and was general manager of the organization for 25 years.

As an agronomist for the Virginia Agricultural Extension Service, he organized the Virginia Crop Improvement Assn. in 1921. Two years later, 150 members of the improvement group, acting under Mr. Wysor's leadership, formed a cooperative to handle seed. The first organization was the Virginia Seed Service. It became Southern States Cooperative in 1933.

PROTESTS DUE ON FREIGHT INCREASE

WASHINGTON—With a rail freight increase set to become effective Feb. 1, 1958, the fertilizer industry has been alerted to file individual protests to the Interstate Commerce Commission before the deadline of January 20. Paul T. Truitt, executive vice president of the National Plant Food Institute, has mailed information to the industry giving detailed instrucfions of steps to follow in filing opposition to the proposed rate increases. He emphasizes the importance of following through on contacting the ICC, reminding that unless that body sees fit to suspend the increase, it will become effective Feb. 1.

Increases will be on fertilizers and fertilizer materials generally, it is pointed out. These will include superphosphate and potash, and will amount to 20¢ a net ton, regardless of distance hauled. On phosphate rock, the increase is 10¢ a net ton. (No increase is proposed on these commodities for movements wholly within Southern territory, however.)

The need for quick action is imperative, the NPFI has indicated. Protests filed by a wide segment of the industry, pointing out the ill effects of such a freight increase, will have a considerable amount of influence on the ICC, it is observed.

Oregon Farmers Produce Record Crops

PORTLAND, ORE.—Oregon farmers in 1957 produced the largest tonnage of principal crops on record when they turned out an estimated 5,697,000 tons of berries, vegetables, tree fruits, nuts, seed and field crops, according to Ray B. Hile, agricultural statistician in charge of the Oregon USDA Crop and Livestock Reporting Service.

The year's total output of 5,697,000 tons is 7% larger than last year's 5,333,000 ton total, the previous high tonnage. The 1946-55 average is listed at 4,641,000 tons.

Mr. Hile explains that the 1957 record total is due largely to an 8% increase in field crops from 1956 and an increased berry, tree fruit and nut production.

Weed Conference

SAN JOSE, CAL.—"Progress and Promise in Ten Years" will be the theme of the tenth annual meeting of the California Weed Conference, it was announced by Dr. Vernon I. Cheadle, Davis, conference president. The conference will be held Jan. 21-23, 1958 in the Civic Auditorium at San Jose.

Greenville, Miss., New Hercules Sales Center

WILMINGTON, DEL.—Establishment of the Greenville, Miss., office of Hercules Powder Co.'s Naval Stores Department as headquarters for a new sales district has been announced here by G. F. Hogg, general manager of the Naval Stores Department.

At the same time, it was also announced that Leonard V. Edwards has been named district sales manager of the office. The appointment is effective immediately. The new sales district will consist of Arkansas, Louisiana and Mississippi.

The Greenville office located at 202 Arcade Bldg., Thomas Center, will handle the sales of all Naval Stores Department products including rosin and rosin derivatives; pine oil and turpentine; as well as toxaphene; meta Delphene, a new repellent and Delnav, a new pesticide.

Mr. Edwards, who joined Hercules in 1952, has a B.S. in agriculture and an M.S. in entomology from the University of Arkansas. Immediately after joining Hercules he was assigned to the Naval Stores Department's Dallas office as a technical sales service man and worked in the Arkansas and Louisiana areas. When the Greenville office was established as a suboffice under Dallas in January, 1956, Mr. Edwards was put in charge. For the past year, he was in charge of the toxaphene demonstration program in Louisiana.

Promotions Announced in Advertising Department

MINNEAPOLIS—The Miller Publishing Co., which produces Croplife, has announced promotions involving three men in the advertising department. Carl R. Vetter has been made advertising department manager to succeed Thomas A. Griffin who retired from the firm on Jan. 1 after 43 years of service; Bruce A. Kirkpatrick was appointed advertising production manager, the position formerly held by Mr. Vetter, and Lee Hubert will be an assistant. All of the appointments were announced by Wilfred E. Lingren, advertising director.

In addition to their work on Croplife, the trio will handle advertising production for the firm's other six publications: The Northwestern Miller; Feedstuffs; Milling Production; The American Baker; Professional Feeder; and Farm Store Merchandising.

FLOOD PREDICTIONS MADE

DENVER—Gloomy predictions of floods in most, or all, of Colorado's major watersheds next spring were voiced here recently at a meeting of the Colorado Watershed Conservation Assn. Delegate after delegate expressed fears that runoff from an expected heavy snowpack would bring floods in many areas of the state. This, they added, pointed to the urgent need for a series of high-altitude reservoirs that would remove water during the peak periods of runoff, then release it later when stream flows have returned to normal.

KAW OPEN HOUSE—About 70 dealers from Kansas and Nebraska attended an open house recently at the Kaw Fertilizer Service, Lawrence, Kansas, where they heard about the manufacture of liquid fertilizer, saw a display of application equipment and heard talks on merchandising and selling. Among the speakers was Dr. H. J. Stangel, Nitrogen Division, Allied Chemical & Dye Corp., who talked about using agronomy to sell fertilizer. Shown in the upper photo, from left to right, are Fred Reed, Overbrook, Kansas; Dean McHard, president, Kaw Fertilizer Service; Norbert Habercamp, Horton, Kansas; and Dick Wilson, Campbell Manufacturing Co., Walthill, Neb. Mr. McHard and Mr. Wilson are explaining the construction of a mounted gasoline driven pump unit for application of liquid fertilizer or liquid nitrogen direct from the nurse tank. The lower photo shows Mr. McHard talking to the group.

Aster Yellows Top Manitoba Disease, Agronomists Told

WINNIPEG—Aster yellows was the most important disease in Manitoba during 1957 on prairie field crops, vegetables and ornamentals and caused a 15% reduction in Manitoba's flax crop and heavy losses in other crops. In making this report to the annual conference of Manitoba agronomists held here recently, Dr. B. Peturson of Canada's plant pathology laboratory in Winnipeg, pointed out that cereal rusts did little damage in western Canada last year.

Wheat leaf rust was the type most common but it caused significant damage in only a few fields of susceptible varieties in east central Saskatchewan. Only trace amounts of wheat stem rust occurred during the year in the prairie region. Stem rust and crown rust of oats were present in Manitoba and eastern Saskatchewan but caused little damage.

Plant scientists agreed that the small amount of rust can be attributed to the use of rust resistant varieties, the late northward movement of rust spores from the southern United States and to a relatively early harvest.

Very little smut was detected in prairie wheat and oat crops in 1957, again due to the use of resistant varieties. However, it continued to be found in quantity in barley, attributed to the wide use of susceptible barley varieties.

The group took particular notice of leaf spots, caused by fungi, bacteria or viruses, especially as they related to barley, because of the fact that they were more conspicuous on barley than they were on other cereals.

Sunflower pests were on the increase in Manitoba last year, according to a survey conducted by two members of the Canada Department of Agriculture's entomology division, P. H. Westdal and C. F. Barrett. However, crop damage from this cause was relatively light.

For the first time since 1949 larvae of the painted-lady butterfly caused considerable leaf damage but there was little reduction in yield. The sunflower beetle was also more abundant than it has been since 1952. Some spraying was necessary to prevent crop damage by these insects.

At the same time a particularly high population of the six-spotted leafhopper, conveyor of the virus disease aster yellows, coincided with an increase in this disease on sunflowers.

Study reports, presented to the recent conference of agronomists, confirmed that the leafhopper population was the highest on record in the province over the past year and caused heavy losses to the province's flax crop.

Manitoba agronomists gathered at the conference also learned that insects have a highly developed sense of taste and crops differ in palatability for them.

A. J. Thornsteinson, of the University of Manitoba's entomology department, pointed out that highly selective insects such as the sweet clover weevil require unusual flavors in their food that are available in only a small number of plants. Chemicals that deter feeding also occur in plants, and he suggested that for this reason a study of these chemicals would be useful as a guide to breeding resistant varieties.

Insecticides mixed with grain when it is first stored can protect it from insect damage up to about a year after treatment provided grain moisture content does not exceed 12%, F. L. Watters, federal government entomologist, told the conference. He said that this type of treatment is in addition to granary clean-ups and the use of bin sprays and is not meant to replace former practices.

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USDA SCIENTIST SAYS:

Eradication Is Best Method to Deal with Agricultural Pests

INDIANAPOLIS—Success in past efforts to eradicate agricultural pests —rather than merely to control them —has built public confidence in the principle of eradication, according to Dr. M. R. Clarkson, deputy administrator of the U.S. Department of Agriculture's Agricultural Research Service.

"One reason the American people think first about eradication is that they have been shown on many occasions that certain pests can be eradicated," Dr. Clarkson said in an address delivered before the American Association for the Advancement of Science at Indianapolis, Ind. "They've learned," he added, "that a practical eradication campaign is a lot cheaper than living with a pest year-after-year."

Livestock diseases that have been eradicated for all practical purposes, Dr. Clarkson said, include pleuropneumonia of cattle, the cattle fever tick, cattle scabies, dourine and glanders of horses, fowl plague and the highly fatal Asiatic form of Newcastle disease of poultry. Foot-and-mouth disease has also been eradicated each time it has invaded the North American continent, he added.

The eradication record against plant pests is equally outstanding, Dr. Clarkson said. The Mediterranean fruit fly was eradicated in 1929, parlatoria date scale in 1936, citrus blackfly in 1938, and citrus canker in 1943.

This shows, the scientist asserted, that "the eradication philosophy—and also the quarantine philosophy—are pretty well implanted in this country."

In the "eradicate-if-possible" philosophy, according to Dr. Clarkson, the "if" is a big one. He called for a reappraisal to find out why some eradication efforts are falling short.

He said that the developing fight against witchweed, a parasitic enemy of corn that recently infested fields in North Carolina and South Carolina, points up the need for broad research attacks on new plant pests. Current witchweed studies are directed toward seeking chemical, mechanical and cultural methods of controlling the pest. Some of the witchweed research is as basic as determining how witchweed seeds germinate and grow in different types of soil and under different conditions of moisture and temperature, Dr. Clarkson said.

Agricultural chemical industries have made tremendous strides in recent years in finding new organic pesticides, and it is not surprising that chemicals have developed into one of the chief plant pest control weapons in recent years, Dr. Clarkson said.

Chemical fumigants are figuring in USDA eradication campaigns against the Hall scale, a fruit and nut tree pest, and against the Khapra beetle. Chemical sprays have been employed against the Medfly, which re-invaded Florida in 1956, and to help eradicate the gypsy moth in New York and New England. Insecticidal chemicals are being used also in an eradication campaign that began recently against the imported fire ant in the Southeast.

"There can hardly be too much research against diseases and pests that cost the American economy about $9 billion a year," Dr. Clarkson concluded. "In the years immediately ahead, the goal should be to maintain and advance the production efficiency of American farmers by reducing these losses. In the years beyond, the stakes will be even higher—perhaps a battle between man and pests for survival."

Gibberellic Causes Male Sterility in Corn

EAST LANSING, MICH.—Paul M. Nelson and Dr. Elmer C. Rossman, Michigan State University farm crops researchers, report that plants sprayed with relatively high concentrations of gibberellic acid developed sterile or partially sterile tassels during 1957 tests. They were checking to see whether gibberellic acid could control the flowering time of corn.

Although the results of the 1957 tests were other than what was wanted, researchers say they feel the findings may have great possibilities. Hybrid seed corn producers may eventually be able to use gibberellic acid to induce male sterility. This would eliminate having to remove tassels from female plants by hand.

Further tests are necessary to determine whether it will be practical to chemically induce male sterility for hybrid seed corn production.

Aphid on Decline

SAN FRANCISCO — The spotted alfalfa aphid, which once threatened doom for California alfalfa production, is reported on the decrease in several major alfalfa-growing areas of the state. This was reported by representatives of Fresno, Tulare, Kings, Kern, San Joaquin, Monterey and other California counties at the first annual meeting of the Alfalfa Section of the California Farm Bureau.

Donald E. Hope

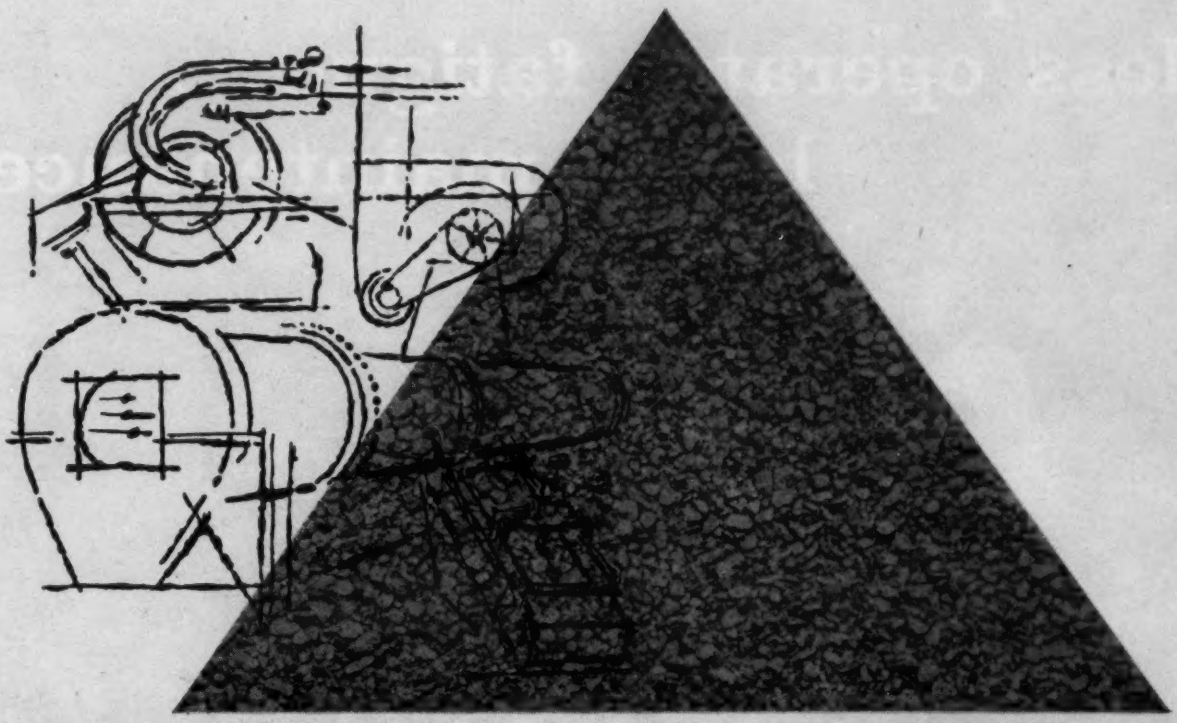
Donald E. Hope in New Pennsalt Post

TACOMA, WASH. — Appointment of Donald E. Hope to the position of northern manager of agricultural chemicals effective Jan. 1, 1958 has been announced here by Errol H. Karr, vice president, Pennsalt of Washington Division, Pennsalt Chemicals Corp.

Mr. Hope, a veteran and agricultural economics graduate of Cornell University, joined Pennsalt Chemicals in 1950 at which time he was assigned to agricultural chemicals sales. Since 1956 Mr. Hope served as agricultural chemicals district sales manager of the northeastern and mid-Atlantic states. Mr. Hope will move his family from Levittown, Pa., to Aurora, Ill. where he will make his headquarters.

AT AMMONIA CONVENTION—Exhibits, demonstrations and lots of interchanging of ideas dominated the recent convention in Little Rock of the Agricultural Ammonia Institute. (See page 1 of the Dec. 23 issue of Croplife). In the left photo in the top row above are George W. Harden, DeSoto Chemical Co., Nesbitt, Miss.; Jeff I. Davis, Jr., Southeastern Liquid Fertilizer Co., Albany, Ga., and A. A. Burris, Burris Chemical Co., Charleston, S.C. A demonstration of the advantages of using a vapor operated transfer pump instead of bleeding in the transfer of anhydrous ammonia from a nurse to an applicator tank is demonstrated in the center photo at top by Don Horton and John Blue, III, the John Blue Co., Huntsville, Ala. T. H. Abboud, Abboud Farm Service, Mexico, Mo., is watching. In the right photo at top are Harold Parker, Delta Butane Gas & Fertilizer Co., Helena, Ark.; J. B. Parker, Graham Plow Co., Newport, Ark., and Bill Akers, Delta Butane Gas & Fertilizer Co.

Charles W. Bourg, United States Steel Corp., Salt Lake City, Utah; Paul J. Duesterhaus, Duesterhaus Farm Supply, Fowler, Ill., and E. W. Thomas, Farm Service Corp., Boonville, Mo., are shown left below. C. L. Hedman, Shell Chemical Corp., San Francisco, and Starr L. Pitzer, Squibb-Pitzer, Inc., Dallas, are in the photo second from left. W. R. Stephens and R. I. Rankin, Barnard & Leas Manufacturing Co., Inc., Cedar Rapids, Iowa, and Dr. Tom Longnecker, Texas Research Foundation, Plainview, Texas, are shown second from the right. Paul J. Duesterhaus, Duesterhaus Farm Supply, Fowler, Ill., incoming president, and Fred M. Stewart, Agricultural Ammonia Service, Inc., Santa Paula, Cal., outgoing president, are at the right.



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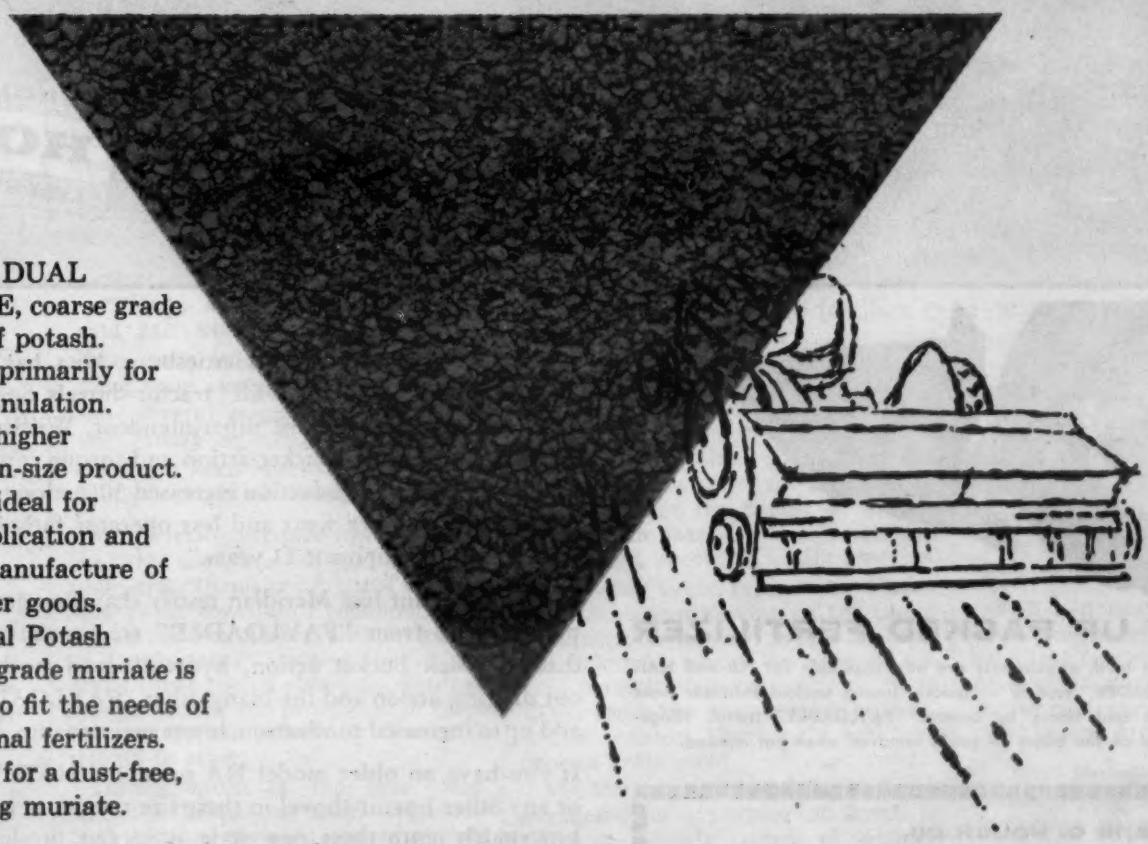

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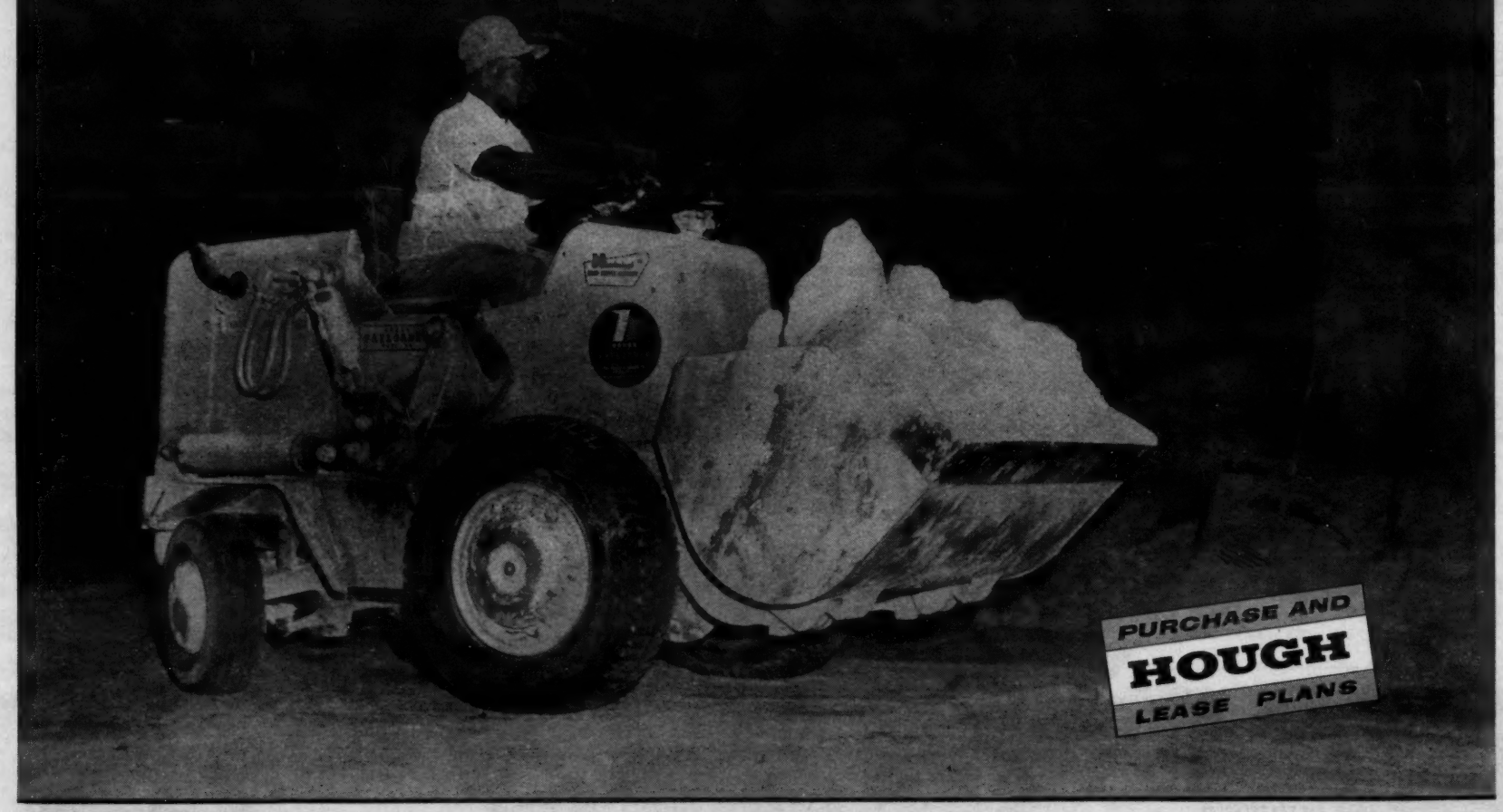

RIP UP PACKED FERTILIZER

Scarifier teeth attachments are now available for HA and HAH "PAYLOADER" models — quickly loosen packed fertilizer from runways and floors by reverse "PAYLOADER" travel. Hinge-mounted on the boom — easily removed when not needed.

Meridian Fertilizer Factory, Hattiesburg, Miss. has 5 model HA and 3 larger HAH "PAYLOADER" tractor-shovels. Speaking of the new style model HA the plant superintendent, William H. Field says, "Roll-back, breakout bucket action and torque converter drive is an ideal combination. Production increased 30% along with lower maintenance and less tire wear and less operator fatigue. We have been using Hough equipment 11 years."

Plant after plant like Meridian testify that they get more and better performance from "PAYLOADER" tractor-shovels. They tell us that roll-back bucket action, hydraulic-load-shock-absorber, break out digging action and the many other "PAYLOADER" features all add up to increased production, lower maintenance and greater safety.

If you have an older model HA or model HAH "PAYLOADER" or any other tractor-shovel in their size ranges, it will pay you to see how much more these new style units can produce. Your Hough Distributor would like to show you. Contact him today, and ask about Hough Purchase and Lease Plans too.

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Marketing News and Features

Oregon Dealer Says

Farm Chemicals Tie in Nicely With Other Farm Supply Items

By Jess Blair
Croplife Special Writer

The Andrews Seed Co., Ontario, Ore., is a long-established firm presently owned by Mr. and Mrs. John Stubstad.

In the last two years many changes have been made. The company has long been an established seed firm, but the Stubstads decided a retail farm store would work in nicely with the seed business. The former owner had sold a few items but no effort had been made to build a modern, progressive store.

The Stubstads saw an opportunity to reach more customers and take some of the slack out of seed sales, which are mostly seasonal. They renovated the large, rambling building by putting in partitions and painting the outside.

The store part is now divided into three rooms. It has an office, a large room for merchandise, and in the back part of the building is a large room for bulky supplies.

Gradually lines were expanded so that the store now handles fertilizers, insecticides, weed killers, fungicides, animal health products, garden and lawn supplies, pet supplies, small hardware and scores of other items.

A line of boats and supplies also was added. Now this may seem strange for a farm store, yet there is a very good reason for it. Mr. Stubstad is an ardent outdoorsman, and in this part of Oregon where the Snake River flows on one side of town and the deserts and hills rim the other side, hunting and fishing are the leading hobbies.

Since many of his customers also like boats and guns, Mr. Stubstad decided to take advantage of the situation. Now the boats, motors and other marine supplies bring in a nice profit. Also the placing of large outdoor pictures, elk and deer heads on the walls gives the store a western atmosphere that attracts the attention of all who enter it.

"We've added many farm customers," says Mrs. Stubstad, "but perhaps half our sales are to townspeople. Here where our summers are fairly short and the weather is so wonderful, people go in heavily for trees, shrubs and flowers. It's also a place where insects thrive and lots of fertilizer is used. We sell seeds and fertilizer, then later the same customer comes in for insecticides, weed killers and other items."

One main advantage to the retail store is that it takes the slack out of the dull seasons. Sales are much larger during the warmer months, but even during cold weather the large supply of products attracts many customers. They buy feeds, poultry and animal health products and small hardware.

In operating a successful store, the Stubstads give several rules that might apply to any owner, regardless of location.

1. Keep a clean, attractive place. On the walls and island displays they have everything labeled. One sees large signs such as "Insect Killer," "Fungicides," "Weed Killer," and others. Also the price is marked on each item to speed up self service.

They keep the related items close together. For instance, garden seeds, fertilizers and insecticides are placed on adjoining displays, while the pet foods and supplies are on the same shelves.

2. Keeping a variety of merchandise. While the Stubstads don't have an exceedingly large store, it is well stocked with almost every item a farmer or town resident may need in these lines.

"We try to keep our customers from going somewhere else after items," says Mrs. Stubstad. "To accomplish this, we must keep nearly every thing a customer is likely to ask for."

3. A thorough knowledge of the business. The Stubstads had had experience in dealing with farm and ranch people before buying their present business, and Mr. Stubstad had spent many years in the seed business. This experience comes in handy now, because many customers want help on the new chemicals. By being able to answer questions and even making trips to the customer's place many new people are brought into the store.

"Things are changing so fast," said Mr. Stubstad, "that even a man experienced in agriculture must keep studying all the time. I take several magazines, work with the county agents and entomologists and keep abreast of what research centers are doing."

4. A friendly attitude toward everyone. This doesn't mean just a hurried smile and "thank you," but a willingness to sit down with customers and discuss their problems, without giving an impression of rushing the visitor. Many times such a visit may result in a large sale or the promotion of some new enterprise which the farmer is willing to start.

During much of the time, Mrs. Stubstad keeps the store while her husband runs the seed cleaning a half block away. She serves all visitors with cold lemonade and other fruit drinks. Also the coffee is kept percolating and is offered to everyone, whether he buys anything or not.

5. Stocking items that will sell at different times of the year. The store and seed business also work nicely together because of this seasonal difference. Mr. Stubstad is kept busy from September until April cleaning and shipping seed.

Then during the growing season when the seed business almost stops, the couple can devote their time to booming farm sales.

"Our retail store has been a great help," he said. "It keeps us both busy, but it means greater profits and a brighter outlook. Either business might make us a living, but the two together mean a living and quite a lot extra."

HANDLING A CUSTOMER—Mrs. John Stubstad, who with her husband own the Andrews Seed Co., Ontario, Ore., is shown here waiting on a customer. The company stocks a large supply of farm chemicals and related farm supplies to provide year-around sales volume. All items are neatly displayed on wall shelves and island displays. Coffee and lemonade are available at all times to customers.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

Drouth-struck farmers understandably are reluctant buyers of fertilizer. Dealers in drouth areas have to call on all their sales resources to stay in business. They need all the evidence they can gather to prove that it pays to fertilize even during drouth years.

Dealers in drouth areas will find helpful the ammunition provided recently by K. G. Brengle, assistant agronomist with the Colorado agricultural experiment station. Mr. Brengle is in charge of fertilizer experiments which have been under way since 1952.

His work has shown that dryland farmers who apply nitrogen fertilizer to wheat can expect increased yields under favorable conditions. Even at the height of the recent drouth season, wheat responded to nitrogen, according to Mr. Brengle.

For many years, farmers have looked with some misgiving on the use of fertilizers on dryland crops. In eastern Colorado, where the average annual precipitation ranges from 13 to 19 in., there has been concern that nitrogen causes "burning" and decreases grain yield.

Mr. Brengle conducted fertilizer experiments on a number of farms in different climatic zones of eastern Colorado. Nitrogen was applied in varying amounts ranging up to 90 lb. per acre. He found that about 30 lb. nitrogen per acre is the most economical rate.

On the lighter textured, or sandy soils wheat yields showed an increase in about 67% of the tests harvested. This increase averaged 5.4 bu. per acre.

On loamy sand soils, wheat responded to nitrogen at all locations. Only half the experiments on sandy loam soils showed increased yields, however.

In no case did the use of nitrogen result in a lower yield.

"Nitrogen fertilizer does the most good on light textured soils," Mr. Brengle said. "Responses in heavier soils are not as likely except under favorable moisture conditions."

Fall and early spring applications of nitrogen on dryland wheat are equally effective, the agronomist discovered. In spring, ammonium nitrate is the best carrier. It should be applied before April 10, he says.

Mr. Brengle reported an increased yield of wheat straw in the fertilized fields. This straw is important as ground cover to prevent wind erosion. Greater protein content of the grain was another benefit of nitrogen.

As to the method of application, Mr. Brengle's advice is to broadcast the nitrogen either before or after planting the wheat. If applied before, it could be disced in. Nitrogen should never be mixed with the seed in the drill, he says.

Use of fertilizer on dryland wheat must be accompanied by good management, Mr. Brengle stresses. This means using clean-treated seed of high germination, adapted varieties, and good tillage and seedbed preparation.

Maximum benefits from the fertilizer depend on the cooperation of Mother Nature. A soaking rain at planting time, and again in March or early April, helps tremendously.

Meadow Mouse Damage In Northern California Set at $500,000

SACRAMENTO—Rolo E. Talbert, district superintendent of rodent and weed control in the California Department of Agriculture, estimates that the meadow mouse infestation in northern California has caused $500,000 damage to crops. Thousands of acres of crops in Oregon and Idaho also have been damaged.

Mr. Talbert said the rodents posed a threat to human life in the area since they are known to spread tularemia, or rabbit fever. The U.S. Public Health service has set up a laboratory in Klamath Falls, Ore., to study the situation in an area extending from central Oregon to northern California and from the Cascades to the southern Idaho border.

In the Tulelake area of Siskiyou County, California, the loss to potato growers alone from ravages of the meadow mice is $400,000, Mr. Talbert said. In addition 10,000 acres of alfalfa and 7,000 acres of of clover were damaged. Farther south in Mono County, California, 20,000 acres of crops were damaged, 5,000 of them seriously.

The infestation, the result of last winter's exceptionally favorable conditions for reproduction, is reported by experts to be one of the largest ever noted in the United States. Some scientists have estimated there are as many as 10,000 mice in a single acre in some sections.

Oregon Weed Conference Hears Paper on Mylone

CORVALLIS, ORE.—A paper on Mylone fumigant, soil-treating chemical manufactured by the Union Carbide Chemicals Co., Division of Union Carbide Corp., was delivered by Robert E. McKenzie, Pacific Coast representative of the company's Crag Agricultural Chemicals Department at the sixth annual Oregon Weed Confernce, Corvallis.

Two of the best features of Mylone, Mr. McKenzie stated, are its safety and ease of application.

Mylone fumigant is formulated as a white powder, and applied dry in a fertilizer spreader three weeks before planting. After treatment, the material is irrigated into the soil surface. It is used to control weed seeds, soil diseases, insects, and nematodes in plant and propagating beds.

Currently, Mylone is being used commercially on ornamental and tobacco seed beds while experimental applications continue in vegetable, forest-tree seed beds and on turf, Mr. McKenzie said.

Elmo Jenson in New Olin Mathieson Post

NEW YORK — Elmo Jenson has been promoted to area sales supervisor, southern Arizona, for the plant food division, Olin Mathieson Chemical Corp., L. S. Madsen, district general manager, has announced.

Mr. Jenson formerly was field representative in Coolidge, Ariz. In his new position he will supervise sales of fertilizers and other agricultural chemicals in Arizona's Pinal, Pima and Santa Cruz counties.

Before joining Olin Mathieson in 1953, Mr. Jenson taught agriculture in both Parker and Coolidge high schools. He is a graduate of Utah State Agricultural College.

SOUTH DAKOTA MEETING

MILLER, S.D.—The South Dakota State Weed and Pest Control Conference will be held here March 18-19.

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THIS GIANT PRILLING TOWER—the only one on the Pacific Coast – processes 50,000 tons of prilled ammonium nitrate annually, which assures you of ample supplies at all times.

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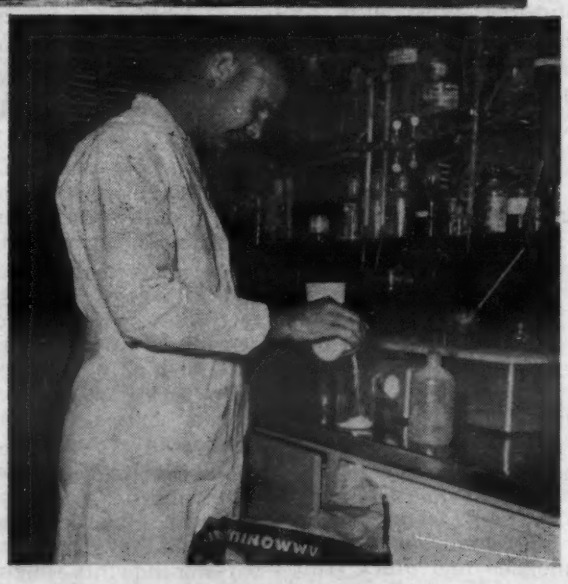

SAMPLED TO GUARANTEE QUALITY—Each shipment of Brea Brand dry fertilizer is quality-checked before delivery is made. While they are in storage, supplies of prilled ammonium nitrate are inspected in a never-ending program of rigid quality control.

UNIFORM, FREE-FLOWING PRILLS—Careful, uniform sizing and coating produce free-flowing Brea Brand Prilled Ammonium Nitrate. Prills apply evenly regardless of the application rate, are easy to apply by ground rig, aircraft, or sprinkler and surface irrigation.

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33.5% Nitrogen guaranteed
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Fieldside delivery to save handling costs.

LOW POTASH

white spots early

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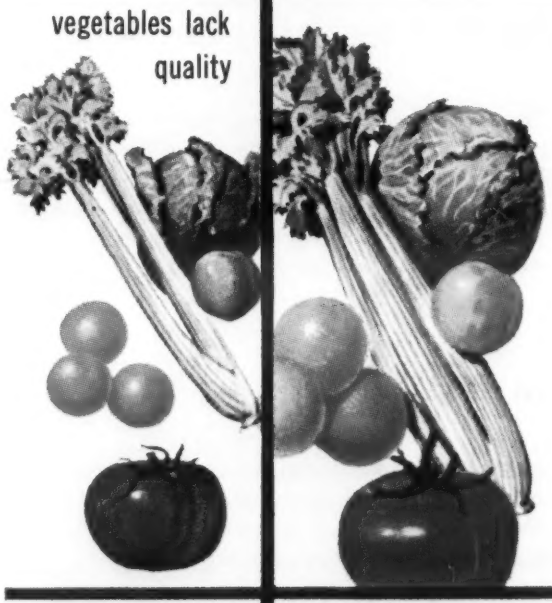
vegetables lack quality



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HIGHER YIELDS — Potash, in a balanced fertilizer program, enables crops to make better use of water. Fruits and nut crops develop best market size. Fruits and vegetables give higher yields, of higher quality. Potash helps crops fight off disease.

BETTER QUALITY — Potash safeguards the market for Western crops by improving the shipping quality of fruits and vegetables. It helps build solid heads of lettuce; evenly-ripened prunes and tomatoes; fewer culls; more market appeal.

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see next pages for more

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services and ideas you can

For more than 22 years, the American Potash Institute has helped expand the markets for fertilizers on American farms.

During this period, tonnage of fertilizers purchased by American farmers has made the most dramatic gain in the history of the fertilizer industry (see chart, lower right).

These tonnage gains have been the direct result of an increasing awareness by farmers of the role balanced fertility programs can play in more profitable farming. Many individuals and groups have helped to create and expand this awareness.

The American Potash Institute is proud of having shared in this joint effort. A service organization, it is designed, equipped, always glad to help you expand the demand for balanced plant foods.

Following are descriptions of some of the services available, *right now*, through the Institute. These services can help you sell fertilizer. You are invited to make use of them. Simply mail the coupon at the upper right, or get in touch with the American Potash Institute representative in your area.

REGIONAL FIELD AGRONOMISTS

Practical scientists of stature and long experience *in your area*, these men (to see photos, turn page) are glad to give advice and help in any way they can.

FERTILIZER DEMONSTRATIONS

In cooperation with official agricultural agencies, Potash Institute staff members help set up field demonstrations, which show farmers the value of correct fertilizer usage.

AID TO FARM PRESS, RADIO, TV

Potash Institute staff members work closely with farm magazine editors, radio and television farm directors. Many articles, photos and broadcasts stressing improved soil fertility practices have been originated or aided by Institute agronomists.

MOTION PICTURES

For dealer meetings, customer meetings or showing on local television stations, use a free-loan Potash Institute motion picture. Over 300,000 people see them annually. There are full-color sound pictures on soil testing, deficiency symptoms, tissue tests, and other subjects. Send coupon above, right, for full list and how-to-borrow instructions.

SLIDE SETS

Potash deficiency symptoms, soybean fertilization, alfalfa production—these important stories are clearly told in Potash Institute color slide sets, each with its own accompanying narration. You can use them for dealer or customer meetings. Teachers and agricultural advisers use them for classes and farm meetings.

ADVERTISING

The American Potash Institute carries on an extensive advertising program throughout the United States and Canada. The four-color message on the preceding page is one of the regionalized advertising messages which will appear in major farm magazines this spring and summer. This advertising program *sells fertilizer for you.*

MONTHLY MAGAZINE

The American Potash Institute's magazine—*Better Crops with Plant Food*—is read and studied by agricultural leaders. Articles in *Better Crops* are written by authorities in the soil fertility field. Its circulation exceeds 25,000.

REPRINTS OF SOIL FERTILITY ARTICLES

From 300,000 to 400,000 are distributed annually. These reprints from *Better Crops* go to high school and college classes, and are used by the fertilizer industry as direct-mail or over-the-counter fertilizer educational materials.

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It will bring you—at no cost—tonnage-building soil fertility facts you can use.

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Gentlemen: Please send me information on the topics checked below:

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- ☐ Wall Posters
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STUDY THE CHARTS ➤

WALL POSTERS

Potash Institute charts, on nutrient deficiencies, plant food utilization by crops, and other soil fertility topics, have become standard sources of farm knowledge on fertilizers. They are available for your use, for display purposes.

REGIONAL NEWS LETTERS

What's new in soil fertility in your area. A time-saving digest for you, and extra copies are available for your customers.

FELLOWSHIPS, RESEARCH GRANTS

American Potash Institute graduate fellowships and research grants in some 40 states and provinces have helped train a large number of professional agronomists for responsible positions in the fertilizer industry, colleges, experiment stations and the federal government. The research thus sponsored has developed valuable information concerning correct fertilizer usage, leading to higher levels of fertilizer consumption.

ABSTRACTS

A time-saving service. Available on request, abstracts of scientific articles on soil fertility, from journals and bulletins around the world.

SPECIAL BOOKLETS

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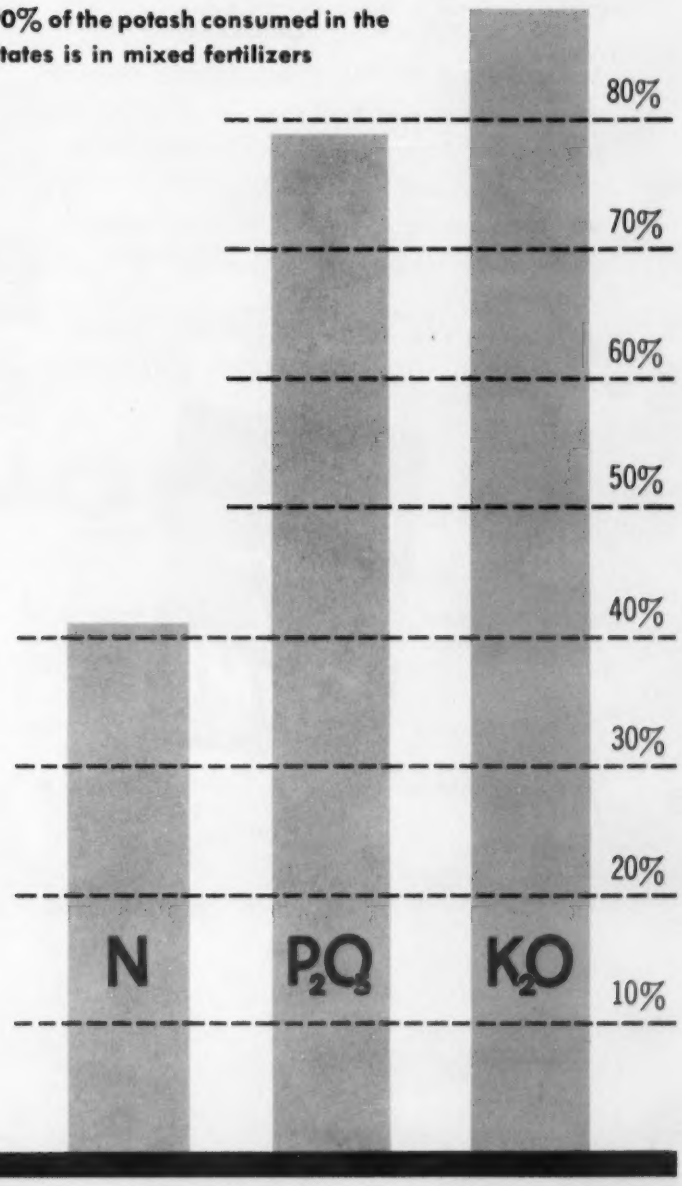
RELATIVE CONSUMPTION OF PLANT NUTRIENTS IN MIXED FERTILIZERS

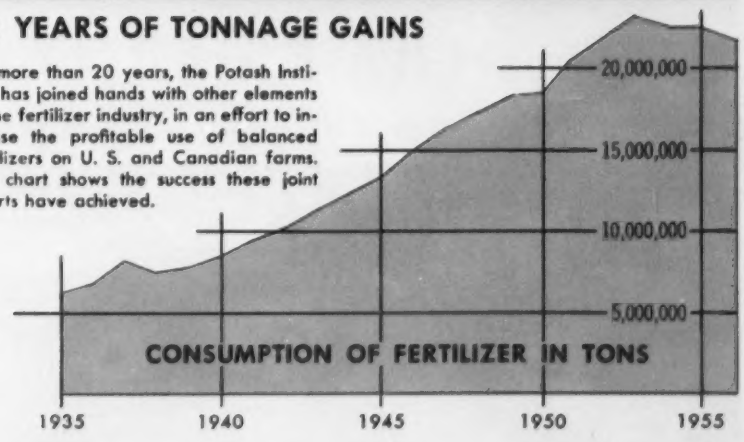
(Source: U. S. Dept. of Agriculture, June 1957)

Nearly 90% of the potash consumed in the United States is in mixed fertilizers



22 YEARS OF TONNAGE GAINS

For more than 20 years, the Potash Institute has joined hands with other elements of the fertilizer industry, in an effort to increase the profitable use of balanced fertilizers on U. S. and Canadian farms. This chart shows the success these joint efforts have achieved.



Serving the Fertilizer Industry

This is the technical staff of the American Potash Institute, Inc.

H. B. Mann
President
1102 Sixteenth Street, N. W.
Washington 6, D. C.

J. D. Romaine
Chief Agronomist
1102 Sixteenth Street, N. W.
Washington 6, D. C.

S. W. Martin, Jr.
Editor
1102 Sixteenth Street, N. W.
Washington 6, D. C.

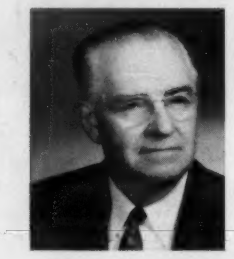
Mrs. Helen N. Hudgins
Librarian
1102 Sixteenth Street, N. W.
Washington 6, D. C.

Mrs. Selma S. Bushman
Assistant Editor
1102 Sixteenth Street, N. W.
Washington 6, D. C.

Miss Elna Misegades
Assistant Librarian
1102 Sixteenth Street, N. W.
Washington 6, D. C.

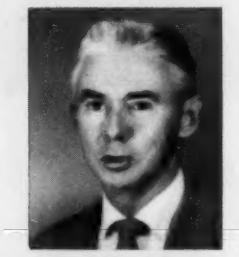
E. T. York, Jr.
Northeast Manager
1102 Sixteenth Street, N. W.
Washington 6, D. C.

Werner L. Nelson
Midwest Manager
Life Building
Lafayette, Indiana

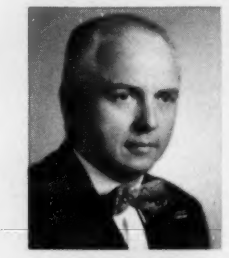


H. L. Garrard
Field Agronomist
1826 Sycamore Road
Homewood, Illinois

G. A. Wickstrom
Field Agronomist
1329 Anthony
Columbia, Missouri



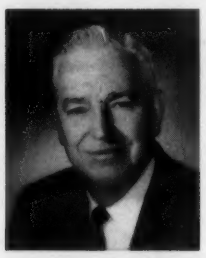
J. Fielding Reed
Southern Manager
Mortgage Guarantee Building
Atlanta 3, Georgia



N. D. Morgan
Field Agronomist
115 Patton Avenue
Shreveport 67, Louisiana

E. H. Bailey
Field Agronomist
113 North Nash Avenue
Starkville, Mississippi

C. W. Summerour
Field Agronomist
Box 963
Montgomery 2, Alabama



M. E. McCollam
Western Manager
314 First National Bank Building
San Jose 13, California

Grant H. Braun
Field Agronomist
13915 S. E. Fairoaks Drive
Portland 22, Oregon

Forrest S. Fullmer
Field Agronomist
2801 Clay Street
Newport Beach, California

R. P. Pennington
Canadian Manager
342 Brant Street
Burlington, Ontario

The technical staff of the Potash Institute includes 14 agronomists, two editors, and two librarians.

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Doing Business With

Oscar & Pat

Lean Frank Gilson came into the Schoenfeld & McGillicuddy store, ambling forward with the slow gait of a farmer who puts in an extra hour or two of work per day and pays for it with a tired feeling.

"Oscar," he said, leaning on the wooden railing which fenced in the office area from the rest of the store, "you are the guy that's smart. You don't get out in the barn early in the mornin' and work all day. You sit in here on your—your hams shovin' those pencils around. That's easier." Luckily for Frank Gilson, Tillie Mason, the plump, ulcerish inclined bookkeeper, had gone to the post office with a mailing, and did not hear his remarks.

Oscar frowned and it did not enhance his sour, balding appearance. "I got my troubles here," he retorted. "You should be in my shoes for a week, with a partner like I got, and with farmers that don't pay their bills and who think we are bankers and can lend money for 120 days without interest. Ach, such a life. You got it much easier."

Gilson bristled a little, "I don't owe you anything, do I? I keep my account paid up."

"Well, there are some that don't," Oscar stated. "Ach, there are too many of them."

"Be that as it may," Frank Gilson said, "give me the low down on this new stunt Pat's got, this soil test idea that he's got. I've been hearin' a lot about it."

Oscar made a gesture of impatience. "That Pat he is always thinking of something that's new. No matter how many bills we got to pay, he thinks of something new that costs money. But I stop him from buying lots of foolish things."

"Well, you gotta experiment now and then in every field to find out what works best," Frank Gilson said. "I sure found that out. I've got bulk feed storage on my farm, and that saves me plenty of work. I couldn't see it for a long time, but I'm glad I got it now. And the old lady kept after me for two years to attend those fertilizer meetings every spring. I did and now I know lots more about how to fertilize."

"Some people run aroundt to meetings so much they neglect their work," Oscar growled, his glance at Pat's empty chair. "And then they leave others to do their jobs."

"So you don't know what this soil test plan is that Pat's advisin'?"

Oscar snorted. "If I had to keep track of all the crazy things Pat does then this business would go kaput fast. I stick to the job and work hard at it. Good thing I do, too."

"I'm interested in that soil test," Gilson said. "Pat told me last spring to use more fertilizer and I disagreed. I shorted on the amount he recommended. Now I am kinda anxious to see who is right, me or him."

Oscar went right on figuring his discounts.

"The way I look at it," Gilson said, "is that if I am right I am going to use the same amount of fertilizer next spring buying it this fall, of course, if I kin get the right price. If Pat is right, I want to increase the amount I buy."

"Well, you can tell after harvest," Oscar said disinterestedly. "You'll know how much corn and crops you got."

"That's not it exactly," Gilson said slowly. "After the crop is harvested I won't know if I could have had a bigger crop. I'd have to put on more fertilizer next year to find out. You won't know how much extra fertilizer you should apply, but you'll know you need some if the soil test shows it. It's sure worth trying."

"That Pat can talk and talk and get everybody all mixed up," Oscar snapped.

"Well, he sure sounds convincing with his soil test idea," Gilson said. "I hear lots of farmers talking about it. Makes 'em realize how their present crops shape up—have they enough fertilizer on 'em or haven't they? And I hear Pat is getting lots of fertilizer orders, too."

"I always have to holler at him to keep the prices up," Oscar pointed out bitterly. "Ach, if he had his way he would give you the fertilizer for nothing."

"Oh, neither of you look starved, Oscar. Say, what's the matter with you? You've been beefing about everything I said. Did your wife raise hell with you today, or somethin'?"

Oscar's back stiffened. "My wife never talks back to me. Ach, she knows who is boss in my house. I say what I want at home and here, too. I do not lie. I never beat anybody. I am here to make money at my business, ach, and isn't that what the farmer wants to do, too?"

"Yeah, I guess you're right," Gilson said slowly, "but I never thought a guy had to be so darn cold hearted about it. Let's kid each other once in a while even when we're makin' dough. Makes both of us feel better somehow. Well, tell Pat to come out and see me with that soil test idea. He may be able to sell me some more fertilizer—maybe."

RANGE INTEREST GROWS

DAVIS, CAL.—Growing interest in improving California's 37 million acres of rangeland is reflected in an increasing number of students majoring in range management at the University of California, Davis. In their course work, range management majors cover such fields as animal husbandry, agronomy, soils, forestry, watershed management, and wildlife. One year is spent on the Berkeley campus for the required courses in the school of forestry.

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What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 5911—Multiwall Paper Bag

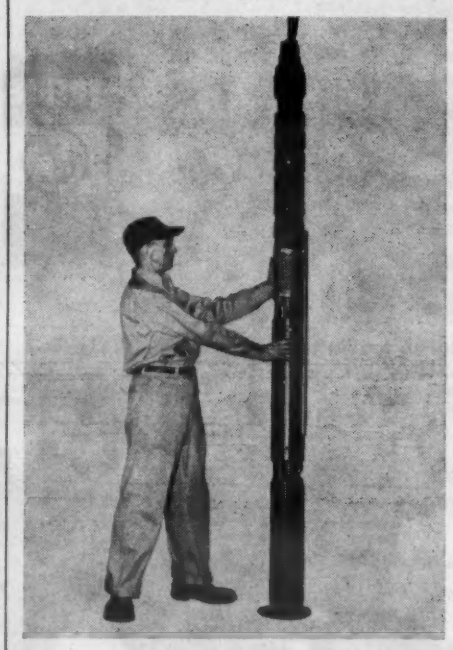
A new type of multiwall paper bag having as its main feature a pasted valve reducing insert that permits standardization of pallet patterns regardless of the density of the packaged product has been developed by the Multiwall Bag Division of the Owens-Illinois Glass Co. in cooperation with the Wyandotte Chemicals Corp. The bag is said to further lend itself more readily to high-stacking. The valve reducing insert makes it possible for the company to make a bag of standard length and width—but with a thickness when filled that may range anywhere from 3½ in. up to 6½ in. The new bag is three-ply and uses two 40 basis weight sheets and one 50 basis weight sheet of natural Kraft paper. Secure details by checking No. 5911 on the coupon and mailing it to this publication. Please print or type name and address.

No. 6676—Mixer-Spreader

A new mixer-spreader optional feature to the Simonsen fertilizer spreader has been placed on the market by the Simonsen Manufacturing Co. This development was designed by Simonsen engineers to meet the needs of operators who want to stock straight ingredients yet offer a wide variety of ratios, company officials said. It permits carrying a small inventory while giving added service. It is claimed that the mixer-spreader accurately mixes the ingredients as it spreads. The compartments are filled with the ingredients and the gate on each compartment is adjusted for the desired ratio. A stainless steel conveyor carries all the ingredients to the distributor fan where they are mixed and spread. The feature is available, with a choice of two or three compartments. Existing Simonsen fertilizer spreader boxes can be modified to the new mixer-spreader. More information may be obtained by checking No. 6676 on the coupon and mailing it to Croplife. Please print or type name and address.

No. 6677—Submersible Pumps

A new line of 6-in. diameter submersible pumps has been placed into production by the F. E. Myers & Bro. Co. The new line is particularly suitable for deep well installations where large volumes of water are needed, company officials state. The pump can be installed in wells as deep as 700 ft. The line's top capacity at a 50-ft. depth is more than 13,000 gal. of water an hour. It is called the "SC" submersible pump and operates completely under water. It is a combined pump and motor unit. The pump is available in 5, 7½, 10 and 15 hp. sizes. Secure details by checking No. 6677 on the coupon and mailing it to Croplife. Please print or type name and address.



No. 5923—Bulk Scale

The newest addition to the materials-handling line of the Burrows Equipment Co. is a 1,000-lb. model 1200 bulk scale. Company officials said the "heavy-duty scale features a built-in Fairbanks-Morse scale to weigh any lot of material down to the ounce, accurately and quickly, as it is handled." The unit is 38 in. high and 30 in. wide, and has a hopper 40 in. in length. All controls—two-wheel foot-brake, scale, dump handle and pushing handle—are located at the rear, within easy reach of the operator. Standard equipment includes 10 in. rubber wheels at the front and 6 in. roller bearing swivel casters at the rear. Details may be secured by checking No. 5923 on the coupon and mailing it to this publication.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6668—Products Catalog

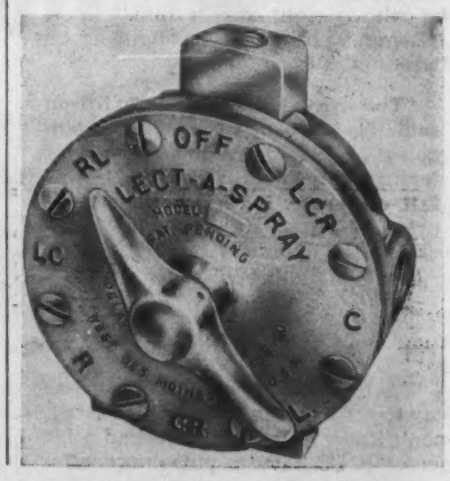
Publication of the 1957-58 edition of its general products catalog is announced by the Dow Chemical Co. The revision includes latest information on properties and uses of some 375 of Dow's basic agricultural, industrial and pharmaceutical chemicals. The 38-page edition includes descriptive information on principal product groups. Detailed information is given in tabular form for quick, easy reference. A copy may be obtained by checking No. 6668 on the coupon and mailing it to Croplife. Please print or type name and address.

No. 5898—Portable Vehicle Scales

Details and specifications of a line of portable vehicle scales in capacities to 70 tons and lengths of 60 ft. are available from the Howe Scale Co., subsidiary of Safety Industries, Inc. Company officials say that additional scale sections can be joined for greater length and capacity; this operation requires nine standard bolts. No pit is required. Many weight record devices may be used with the scales, it is claimed. Secure details by checking No. 5898 on the coupon and mailing it to this publication. Please print name and address.

No. 6675—Boom Control Valve

A new series of boom control valves has been added to the Delavan line of agricultural sprayer products, announces the Delavan Manufacturing Co. The valve will be called the 5600 series. The valve incorporates the features available in the 2800 series plus a ⅜ in. accessory or hand gun



Send me information on the items marked:

- ☐ No. 5875—Belting Catalog
- ☐ No. 5898—Portable Scale
- ☐ No. 5909—Bulk System
- ☐ No. 5911—Bag
- ☐ No. 5923—Bulk Scale
- ☐ No. 6667—Drum Lift
- ☐ No. 6668—Products Catalog
- ☐ No. 6669—Fertilizer Placement
- ☐ No. 6670—Equipment Bulletin
- ☐ No. 6671—Trigger Valve
- ☐ No. 6672—Materials Handling
- ☐ No. 6674—Bag Packer
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- ☐ No. 6677—Pumps

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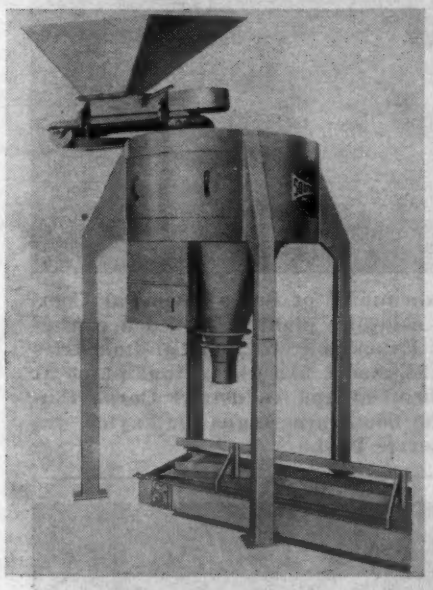
outlet. The 5600 series is available with ¼ in., ⅜ in., ½ in., and ¾ in. inlet and bypass openings. The available outlet sizes are ⅜ in. and ¼ in. Each valve is provided with a ¼ in. gauge outlet. It is constructed of die-cast aluminum and stainless steel. Internal seals of the 5600 valve are a combination of stainless steel and a plastic material resistant to the corrosive effects of agricultural chemicals, it is claimed. Check No. 6675 on the coupon and mail it to Croplife to secure details. Please print name and address.

No. 5875—Belting Catalog

A new catalog has been issued by Extremultus, Inc., manufacturer of power transmission belting made of polymer and chrome tanned leather. The catalog contains sections on significant applications, a description of the belt, selection of the proper belt type, tensioning and maintenance, and bearing load reduction. A free copy may be obtained by checking No. 5875 on the coupon and mailing it to this publication.

No. 6674—Bag Packer

The Chase Bag Co. is distributing a new bagging unit for the fertilizer industry. It is called the "Southland Packer" and it is described as a completely automatic, all-electric device for filling and weighing open mouth textile or multiwall paper bags. It is manufactured by the Chattanooga Boiler & Tank Co. and is distributed exclusively by Chase. It is claimed that the unit will handle 50-, 80- and 100-lb. multiwall paper bags at 25 bags per minute as a typical working speed. Sustained high accuracy of



weights over an extended run is guaranteed. Fertilizer and any other granular or free flowing material can be packed. Chase officials state: "Minimum change-over time from one analysis to another is an outstanding feature." Cylindrical hoppers and buckets allow a clean and complete flow of material. Simplicity of design reduces maintenance costs and problems. Parts are standardized and can easily be interchanged in plants where more than one packer is in use. No air or hydraulic fittings are used. The packer is made from 12 gauge or heavier steel plate and requires no external bracing for rigidity. The feeder is of the continuous operating type, using a ½ h.p. gear-enclosed motor to operate its endless belt, over 8 in. self-cleaning pulleys. Check No. 6674 and print the necessary information on the coupon and mail it to Croplife to secure details.

No. 6671—Trigger Valve

A new trigger valve has been announced by the Spraying Systems Co. for use with turn-handle type spray guns. Positive shut-off is provided for pressures up to 800 psi. Named the No. 46 trigger valve, the unit has these features: "The valve assembly is a heavy duty unit, employing packing and packing nut for a leakproof seal. The large trigger handle, formed to give comfortable full hand grip, is made of plated steel for strength and long lasting service. A heavy duty trigger lock for spraying in open position is locked by a touch of the index finger . . . and releases as soon as the trigger is pressed." The valve is also supplied with adapters for directly connecting nozzles and extensions to make a spray gun. For details check No. 6671 on the coupon and mail it to Croplife.

No. 6669—Fertilizer Placement

A booklet entitled "Fertilizer Placement" has been issued by the American Potash Institute. Institute officials say "the latest efficient methods of placing fertilizer for row crops are discussed for busy agricultural workers in the new 40-page booklet." Four authorities wrote the major articles. The four men are Dr. S. L. Tisdale, National Plant Food Institute; Dr. A. J. Ohlrogge, Purdue University; Dr. D. P. Satchell, Pennsylvania State University; and Dr. R. L. Cook, Michigan State University. The booklet is available without charge. Check No. 6669 on the coupon and mail it to Croplife. Please print name and address.

No. 6672—Materials Handling Survey

Illustrated literature outlining details of a materials handling survey has been prepared by the Towmotor Corp. The literature describes in detail the system in which "expendable" cardboard pallets are employed in combination with hydraulically-operated "Side Shifter TowLoader" attachments. The literature is labeled "Certified Survey No. 179." The reader may secure the report by checking No. 6672 on the coupon and mailing it to Croplife.

No. 6670—Equipment Bulletin

General Metals, Inc., has prepared a new bulletin (201) listing information about its facilities, products, per-

(Continued on page 21)

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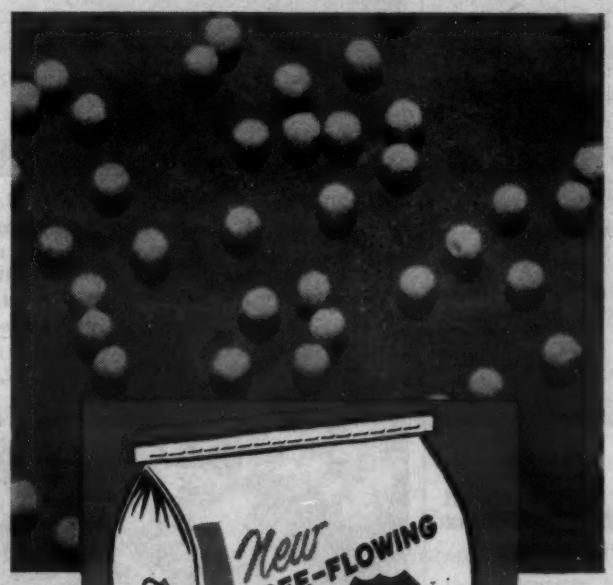

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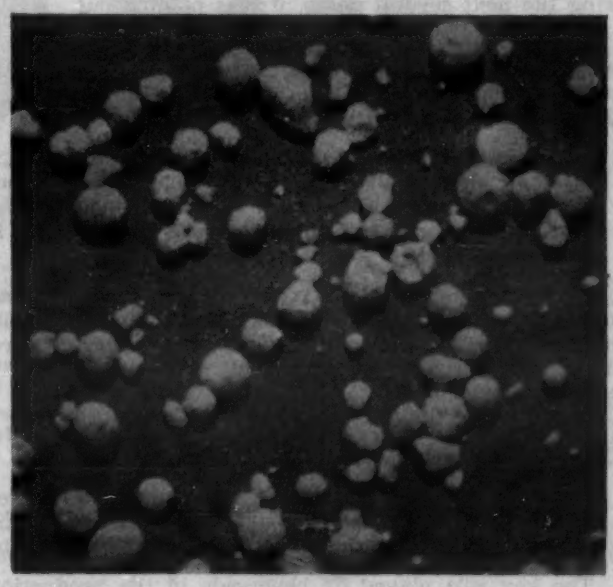

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Phillips 66

What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

An eleven-man committee which had been making a ten-month study of TVA's fertilizer activities recommended that the big government agency should reduce its output of fertilizers to a point more in keeping with its educational program. Conclusions arrived at by the committee indicated that the TVA should broaden its scope of operations to reduce concentration in some areas where the sale of TVA fertilizers present severe competition to the commercial trade; that qualified use of TVA materials on the farm should be clearly of an educational nature, and that educational activities should be evaluated and supported on the basis of their merits in education, without regard to plant production capacity.

Big infestations of grasshoppers were found on over 18 million acres of rangeland in Texas, California, Montana, Colorado and parts of other states. A survey by USDA indicated that outbreaks requiring organized control efforts are likely to occur in 1958.

The cotton crop of 1957 was reduced by some 12% due to plant disease activities, the National Cotton Council reported. The 1957 disease toll was more than 1.5% higher than the average of losses for the period 1952-56, it said.

A good year as a whole was foreseen for the chemical industry in 1958. The Manufacturing Chemists' Assn., Washington, said that sales should total a record $24.4 billion for 1957, and an additional 5% boost for 1958 is foreseen.

Grace Chemical Co. named Dr. J. D. Aughtry as manager of agricultural services. He will assist the sales force in solving technical problems.

Industry leaders in both the pesticide and fertilizer trades looked at business prospects for 1958 optimistically. In Croplife's special "outlook" issue, it was predicted that demand for both plant food and pest control materials should pick up during the next season, and some hope was expressed that the price structure would become stronger.

The transportation picture was described as "chaotic", with prospects for increased freight rates appearing strong. Drouth in the midwest being ended, prospects for a better fertilizer season in that area were outlined as being favorable; and a spokesman for the liquid fertilizer industry voiced the opinion that the supply for 1958 may not come up to demand.

The line between supply and demand for potash was described as a thin one, with the world situation being an important factor in which way the line would vary. Prospects are good for increased consumption of potash during the next several years, it was pointed out.

A continuing increase in consumption of fertilizers was heralded by a west coast spokesman who said that each year sees greater amounts of plant food being applied in that area, at the rate of about 5% a year over that of the previous season.

Fertilizer sales in the east, on the other hand, have tended to level off since their peak in 1953. The current economics of dairy farming and the loss of good farmland to highways and urban expansion have cut into fertilizer use significantly in that area, a spokesman said.

The preliminary USDA report on fertilizer consumption for the year ending June 30, 1957 indicated that both tonnage and plant nutrient content were up significantly over the figures of last year. The report said 22,485,000 tons of fertilizer were consumed, an increase of 292,000 tons over the previous year.

Mixed fertilizers fell off 1.4%, but use of materials for direct application increased 6.6%.

Use of materials containing primary nutrients increased in the amount of 328,000 tons, which betters last year's figure by 4.9%. The amount of secondary nutrient materials was 17.6% greater than that used last year.

The key role played by chemicals in the production and protection of cotton was emphasized by speakers at the Beltwide Cotton Production Conference held at Memphis, Tenn. Dec. 12-13. Pesticide leaders pointed out hazards of insect resistance and the expense of introducing new toxicants to control cotton pests.

A fiercely competitive market for anhydrous ammonia was foreseen by attendants at the Agricultural Ammonia Institute held at Little Rock, Ark. Dec. 11-13. At the same time, a future of unlimited possibilities for the industry was also seen by convention speakers, if the agricultural community can achieve greater productivity per dollar of investment. Use of NH_3 can play a key role in realizing this objective, it was brought out.

The decision by USDA in reducing the price support level for dairy products to 75% of parity was seen as a hint that somewhat the same policy may later be used on other crops now being supported at high rates. Ezra Taft Benson, Secretary of Agriculture, regarded the situation with some satisfaction and was enthusiastic about the prospects for eventually eliminating flexible price supports, rigid high price supports and acreage allotments.

A technique for rearing boll weevils without a cotton diet was achieved by Dr. Erma Vanderzant, USDA researcher at Texas A&M College. Her development of a synthetic diet for the insect makes it possible for the first time to study boll weevils reared under controlled conditions in the laboratory.

Reports on control of herbaceous weeds, woody plants, weeds in field and horticultural crops, and brush on rangeland and pastures featured the 14th annual North Central Weed Control Conference held at Des Moines. A turnout of 600 persons was recorded.

More labeling rather than less is in the future of the pesticide industry, according to a U.S. Department of Agriculture spokesman at the annual Rutgers University pesticide dealers' conference.

NPFI GROUP MEETS—Newly-appointed National Plant Food Institute regional personnel met recently in Washington, D.C., to study and become more familiar with Institute operations, and to confer with staff members on the Institute's expanded research and education program. Surrounding Dr. Russell Coleman and Paul T. Truitt (seated left to right), Institute executive vice presidents, are (left to right): Zenas H. Beers, Midwest regional director; Dr. W. H. Garman, chief agronomist and Northeast regional director; Dr. Samuel L. Tisdale, Southeast regional director; F. Todd Tremblay, Pacific Northwest representative; Dr. Richard Bahme, California and Arizona representative; and Dr. Robert L. Beacher, Southwest regional director.

MODEL DISPLAY—An accurate ¼" scale model of Sohio Chemical Company's nitric acid and ammonium nitrate solutions plant attracted a considerable amount of attention at the recent Exposition of Chemical Industries held at the New York Coliseum. Both the model and the actual plant at Lima, Ohio, were constructed by the Chemical and Industrial Corp., Cincinnati. C. & I. personnel in charge of the booth are Angus M. Taylor, Jr., left; Robert McConnell, Tom Long, and Bernie Burke.

AGRONOMY AWARD WINNER—Robert W. Andrew, student in agronomy at Ohio State University, Columbus, was presented recently with the National Plant Food Institute's 1957 Agronomy Achievement Award. Representing the NPFI is Zenas H. Beers, left, Midwest Regional Director of the Institute. At the right is Dr. Garth W. Volk, chairman of the department of agronomy at Ohio State, from which Mr. Andrew expects to graduate in June. The student, a native of Ohio, plans to continue his studies for a Master and Ph. D. degree and has expressed an interest in teaching. The award was presented at the annual Ohio Fertilizer and Lime Conference at Columbus, Dec. 13. The honor is conferred annually to an outstanding Ohio State Junior student majoring in agronomy and is based on scholarship, character and leadership. It carries a cash prize of $200 and an engraved key. Each annual winner's name is engraved on the plaque shown above.

Industry Patents and Trademarks

2,818,327

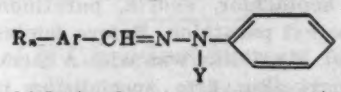
Selective Weed Control by Prevention of Viable Seed Production. Patent issued Dec. 31, 1957, to George Knowles, Ottawa, Ontario, Canada.

A method of selective weed control to prevent the production of viable wild oat seeds in a barley crop, comprising applying maleic hydrazide to said crop immediately after said seeds of said barley have entered the dough stage of growth, the concentration of the active ingredient of said maleic hydrazide being between about ½ and 1½ pounds per acre.

2,818,367

Method of Inhibiting Cereal Plant Rust with Phenylhydrazones. Patent issued Dec. 31, 1957, to Ernest G. Jaworski, Florissant, Mo., and Van R. Gaertner, Dayton, Ohio, assignors to Monsanto Chemical Co., St. Louis, Mo.

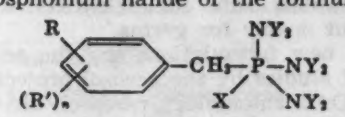
The method of inhibiting the development of rust on cereal plants which comprises applying to said plants a rust inhibiting quantity of an eradicant composition containing as the essential active ingredient a hydrazone having the formula



in which Ar denotes an aromatic hydrocarbon nucleus of from 6 to 12 carbon atoms, n is an integer of 1 to 2, and R is selected from the class consisting of hydrogen, halogen, the nitro radical, the sulfonate radical, the cyano radical, the hydroxy radical, an alkyl radical of from 1 to 12 carbon atoms, an alkoxy radical of from 1 to 12 carbon atoms, and an N-alkyl substituted amino radical having from 1 to 5 carbon atoms in the alkyl radical, and Y is selected from the class consisting of hydrogen and an alkyl radical of from 1 to 12 carbon atoms.

2,818,368

Method of Controlling Nematodes Employing a Phosphonium Halide. Patent issued Dec. 31, 1957, to Milton Kosmin, Dayton, Ohio, assignor to Monsanto Chemical Co., St. Louis, Mo. The method of controlling endoparasitic worms which comprises applying to soils, plants and seeds susceptible to infestation by the worms a composition comprising a phosphonium halide of the formula



in which R is an alkyl radical of from 8 to 18 carbon atoms, R′ is selected from the class consisting of hydrogen and alkyl radicals of from 1 to 4 carbon atoms, n is an integer of from 1 to 2, Y is an alkyl radical of from 1 to 4 carbon atoms and X is halogen.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Glencoe Hydrated Lime, hand-lettered, with drawing of farm scene in circle, for lime as used for agricultural purposes. Filed Nov. 15, 1956, by Mississippi Lime Co., Alton, Ill. First use prior to Oct. 25, 1947.

Green Dot, hand-lettered drawing within circle, for liquid fertilizer. Filed May 27, 1957, by L. E. Juengling, doing business as Kirlen Products, Kansas City, Mo. First use May 1, 1957.

TNT, for insecticides, insect repellents, rodenticides, and fungicides. Filed Feb. 6, 1957, by Truly Nolen Products, Inc., Miami, Fla. First use Jan. 10, 1957.

Herbagere, in capital letters, for nutrient salts used in the soilless cultivation of plants. Filed June 12, 1957, by Niamco, Inc., Dallas, Texas. First use Aug. 17, 1955.

Dura-K, for fertilizer compositions. Filed Nov. 8, 1956, by Glostex Chemicals, Inc., Los Angeles, Cal. First use Aug. 6, 1956.

Feed Store Destroyed

DRAIN, ORE.—The North Douglas Feed Store here was recently destroyed by fire. Grant McCormack, owner, said the fire was attributed to spontaneous combustion. Partial insurance was in force at the time of the blaze on the building, equipment and fixtures. Total loss is expected to be more than $20,000.

Sprout-Waldron Sales Organization Revamped

MUNCY, PA. — Growth of the Sprout-Waldron sales organization and the company's trend toward complete systems engineering have necessitated a change from product line to geographical divisions of responsibility, according to Harold Alsted, vice president in charge of sales. The new policy establishes eight area managers with the job of coordinating all activity emanating from or concerning specific geographical territories, he says.

These men, located at Muncy, will serve as the nerve center for the fifty one salaried sales representatives in the field.

The following home office managers have been appointed, the company announces: S. E. Brong, northeastern district; C. R. Lockard, middle Atlantic district; R. F. Confer, central district; J. L. Muffly, metropolitan district; R. M. Miller, southern district; J. W. Ellmaker, north central district; K. R. Rohm, South and central western district, and D. A. Daugherty, western district.

Each of these area managers will have a specific service representative at his disposal with primary responsibility for assuring that their firm's equipment continues to give the production service for which it was designed. Backing up these area managers is a staff of chief product engineers.

SYSTEMIC CHECK

PENDLETON, ORE.—James Whittaker, Pilot Rock rancher, is cooperating with an Oregon State College cattle grub control demonstration using systemic insecticides. Dr. Robert L. Goulding, Oregon State College entomologist, recently visited the Whittaker ranch where he treated 20 calves by rodding pellets of the anti-grub material into animals' stomachs. Each calf was earmarked and later will be checked with untreated calves to determine grub damage to each lot.

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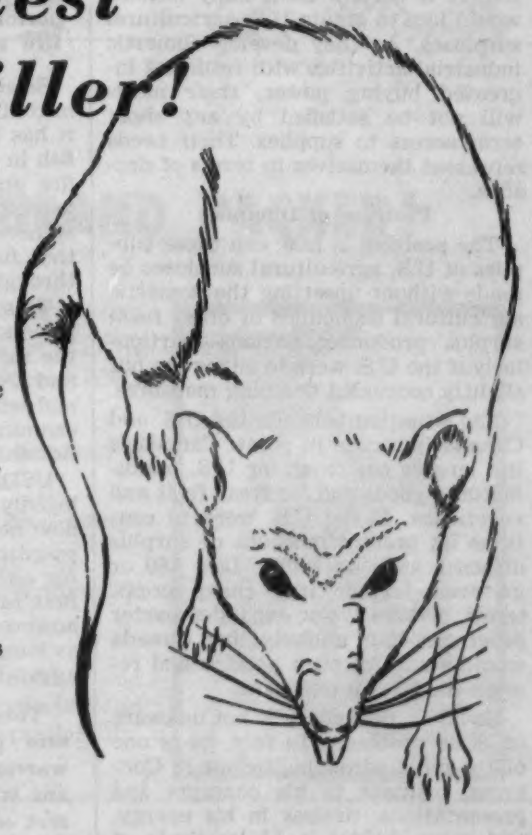

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Warfarin never builds tolerance or creates bait-shyness. Minute intake by rodents causes internal bleeding and certain death.

Economical, effective, safe! Approved for food establishments.

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CONGRESS CONVENES

(Continued from page 1)

sion of Congress are the political undertones motivated by the impending elections, and this warp is woven into the woof of the urgency of defense measures.

Then, there is agriculture. Already there are clear warnings from the Democratic opposition that the farm policies of Ezra Taft Benson, secretary of agriculture, will come under the most bitter attack. On the other hand, Mr. Benson faces a badly divided farm bloc in Congress with the full backing of the President for his program.

Agriculture as Weapon

Warning of the nature of the attack on Mr. Benson may be found in pre-session statements from such a consequential opponent as Sen. Hubert H. Humphrey (D., Minn.) who has espoused the Steagall amendment theory of all-out production of farm commodities as an important weapon in international politics. He would, it is suspected, prefer incentives for all-out farm production now, backed by the theory that the farm producer must be protected against subsequent price collapse when the current cold war emergency ends. This would be done through a guarantee of a high price for his production now and through a tapering-off period when production may be reduced to what might be termed a normal level of world demand.

Sen. Humphrey may find many supporters for his philosophy at this time. He can cite the great farm efficiency of the U.S. He can cite the need for food and fiber among all those countries which can be persuaded to support the international policies of the U.S., particularly among the under-developed nations. When those nations increase their domestic industrial production, he can argue that this will stimulate a demand for food supplies.

On the surface, Sen. Humphrey has a persuasive argument not only for the nearby, but for the longer term, too. It is certain that many nations would like to obtain U.S. agricultural surpluses. As they develop domestic industrial activities with resultant increased buying power, their needs will not be satisfied by any short term access to supplies. Their needs represent themselves in terms of decades.

Problem of Dumping

The problem is how can these supplies of U.S. agricultural surpluses be made without upsetting the domestic agricultural economies of other farm surplus producing nations—particularly if the U.S. were to engage in but slightly concealed dumping measures.

The situation between the U.S. and Canada is a case in point. Canada is the largest customer for U.S. manufactured goods and for fresh fruit and vegetables. If the U.S. were to continue its present methods of surplus disposal, such as Public Law 480 or go even farther into cheap credit terms, give-aways or expanded barter programs, it is unlikely that Canada would stand for such policies and remain the largest customer.

But Sen. Humphrey is not unaware of these problems. In fact, he is one of the most adroit politicians in Congress, brilliant in his concepts and presentations, tireless in his energy, and most skillful in his methods of attack. If he pursues the course outlined, he would be attempting to establish a method of revitalizing the old farm bloc so successfully shattered by Mr. Benson.

Sen. Humphrey might find himself some strange bedfellows—men who have hitherto backed Mr. Benson in his goal of lowering the level of price supports for the basic commodities. The reduction of the level of price support for dairy products starting April 1, 1958, has already found some of the former Benson stalwarts calling the decision a mistake.

Another arrow in the Humphrey bow could readily be an attack on the allocation of costs of the farm program to the U.S. Department of Agriculture. Many members of Congress have previously insisted that some major part of the price support programs and their concomitants be charged to other agencies—such as the Department of State or Department of Defense—because some activities support these respective agency goals.

But, unhappily, if the past is any measure of what can happen at this session of the 85th Congress, it must be expected that legislative judgments will be colored by cross-currents of other matters. The sound and fury of debate will ignore fact and concentrate on vilification of the man in office.

Tear-jerking word pictures of the forgotten family farmer, whom, it is alleged, is literally being dragooned off his land by Mr. Benson, will become familiar phrases. This will be done despite proof that for more than 10 years now farmers have been deserting small, uneconomical farm plots for several reasons, the chief of which is that even under much higher price support levels for all crops, they could not earn a living. Their level would be on the low poverty line.

The farm debate in Congress will gloss over the broader economic factors to gain transient advantage—politicians know that words spoken today are forgotten tomorrow—and that the farm vote, as the city vote, hinges on what the local politicians have contributed to the immediate gain of their districts and constituents, and not what the national welfare requires.

Nebraska Corn Borer Loss in 1957 Totals $20 Million

LINCOLN, NEB.—The Nebraska corn borer loss in 1957 has been estimated at $20 million by Lloyd Anderson, University of Nebraska extension entomologist. He has calculated that the pest took an 18.8 million bushel bite out of the state's corn crop last year. The estimated loss to the 1956 crop was less than $6 million.

Increased damage in 1957 was due to weather conditions at the time borers were developing last spring, Mr. Anderson said. Weather particularly favored the second generation.

Borer numbers increased from 130 per 100 plants in 1956 to 220 per 100 plants last year. Northeast Nebraska counted 475 borers per 100 plants, the largest number found in any Nebraska area.

Soils Courses Scheduled For Three-Month Period

SAN MARINO, CAL.—Two soils and plant nutrition extension courses are planned to extend over the remainder of January, through February and into March, the California Fertilizer Assn. has announced.

The first, scheduled to begin Tuesday evening, Jan. 14, on the Davis campus of the University of California will end on Thursday, Feb. 20.

A second course will begin at Modesto, Cal., on Feb. 4, to continue through March 18. In both courses, lectures will be scheduled for Tuesday and Thursday evenings for periods of six weeks.

Dr. D. G. Aldrich, Jr., chairman of the department of soils and plant nutrition, University of California, Davis, will furnish complete information regarding the courses, the CFA says.

Bernard Willis

JOINS VELSICOL—Bernard Willis has joined Velsicol International Corp., C.A., to handle liaison with U.S. suppliers for worldwide distribution. He will make his headquarters in New York, although Velsicol International headquarters are in Nassau, Bahamas. The company markets outside the U.S. a complete line of insecticides including technical chlordane, heptachlor, endrin, parathion, and methyl parathion. Before joining Velsicol, Mr. Willis was with a chemical marketing firm specializing in importing and exporting operations in which he maintained close relationships with chemical manufacturers. He has had many years of experience in the chemical field, the company states.

New Sterilization Process Found in Ethylene Oxide

WASHINGTON—A safe and effective means of sterilizing sensitive materials—those which cannot stand treatment by steam, dry heat, or liquid chemicals—has been developed by U.S. Department of Agriculture scientists at Beltsville, Md., working under a contract with the U.S. Army Chemicals Corps Biological Warfare Laboratories, Ft. Detrick, Frederick, Md.

The USDA research showed how highly flammable ethylene oxide, a known germicide and insecticide, can be combined with chemicals used in insecticide aerosols to make sterilant formulations safe for scientists to use, but deadly for germs.

The new formulations are the result of studies by the aerosol project of USDA's entomology research division at Beltsville. E. O. Haenni, W. A. Affens, H. G. Lento, and George Mangan, chemists, conducted the research under supervision of Dr. Robert A. Fulton.

Although ethylene oxide has long been used as an insect fumigant and has been known to have sterilizing properties, its flammability has always presented a fire hazard. By combining it with proper amounts of commonly used aerosol propellents, it is now possible to prepare safe, nonflammable mixtures.

Two Join Staff of Woodward & Dickerson

PHILADELPHIA—E. V. Linson and L. MacLean have joined the staff of Woodward & Dickerson, Inc., Philadelphia. Both have had a number of years experience handling feedstuffs, fertilizers and chemicals.

Woodward & Dickerson, Inc. is importer, exporter, broker and commission merchant of feed and fertilizer materials, chemicals and mineral ores. The firm was established in 1873 and now has branch offices in Havana, Barcelona, Manila, Tokyo, Seoul and Washington, D.C.

USDA STRIKES BACK

(Continued from page 1)

mittedly doing some damage—will perform an overall good for the entire economy.

Selecting only one specimen submitted by USDA officials to Croplife, it has been shown that the danger to fish in ponds adjacent to areas where fire ant economic poisons have been used is through leaching of the substance. There is no accurate evidence that fish have been harmed or killed through its use.

This issue over the use of economic poisons has not only been cleared in the instances under attack by USDA and Department of the Interior fish and wildlife service, but also has had examination by the Food and Drug Administration.

USDA officials said that the allegedly "dangerous" economic poison, now being used in the fire ant campaign, was unlikely to be available for either birds or animals after the first rain on the land treated. It did, however, have a residual effect for as long as three years on the fire ant infestation.

This issue is now being blown up into giant-sized proportions not warranted by the facts. The fire ant is an extremely dangerous insect economically and otherwise to the domestic economy. The pesticides now being recommended by federal government agencies are not choices made casually, according to the best informed sources here.

Inherent dangers in the use of these poisons are admitted. But the point raised by USDA officials and others is that it is far safer to administer these poisons under federally administered controls than to have them used in a helter-skelter manner by individual farmers who understand their efficiency but do not fully understand their residual effects.

The influential N.Y. Times suggests that the money now being poured into the fire ant control campaign would be better spent in research. To this comment USDA officials say "amen." But their immediate job is to stop the spread of the fire ant through the coordinated efforts of the federal and state governments.

The editorial says that rodents and rabbits have been killed through use of feeding diets which contained lower levels of this economic poison than the per acre dosage now being used by USDA in its campaign. This conclusion, according to USDA, is one of a controlled feeding condition which is unlikely to occur in actual farming practice.

As noted above, one USDA official commented that "the domestic Tom cat has probably killed more birds this year in the fire ant belt than those whose death has been attributed to the use of economic poisons in the fire ant campaign belt."

Observers here now indicate that it is unfortunate that the influential N.Y. Times has given currency in its editorial columns to views which do not square with mature observations and judgments previously reached by U.S. government officials and representatives of zoological and conservation groups. USDA officials are the first to assert that their control activities are subject to the qualification that the ultimate effects of this work will not work greater harm to fish, birds, animals and predatory insects than the good which they expect can be accomplished.

Tariff Commission Gives Chemical Output Report

WASHINGTON, D.C.—Preliminary reports on production of a number of chemical materials for the months of September and October, 1957, have been issued by the U.S. Tariff Commission.

According to the report, DDT was produced in the quantity of 9,193,333 lb. in September, and 8,931,661 lb. in October.

Production of 2,4-D for September and October, respectively, was 2,947,837 and 3,172,182 lb. Acid esters and salts of 2,4-D were produced in these two months as follows: 1,728,106 and 2,364,741 lb. The acid equivalent of 2,4-D acid esters and salts was reported as 1,412,282 lb. in September and 1,786,125 lb. in October.

Benzene hexachloride output was 1,231,427 lb. in September and 820,157 lb. the following month. Gamma BHC production was 276,184 lb. in September; 228,892 lb. in October.

Production of 2,4,5-T was 408,220 lb. in September and 308,405 lb. in October.

Urea production for September was 75,048,941 lb., while the October output was reported as 88,773,306 lb.

The report was issued by the chemical division of the U.S. Tariff Commission on Dec. 20, 1957.

Hukill Chemical Named As Sales Representative

CHICAGO—Hukill Chemical Corp. has been named by Sole Chemical Corp., Chicago surfactant producer, to serve as technical sales representative in Ohio, western Pennsylvania and the southern half of Michigan. The Hukill organization will service the food, pharmacal, cosmetic, detergent, agricultural and industrial chemical formulators and processors.

WHAT'S NEW

(Continued from page 17)

sonnel and other general information. The company makes a line of equipment for handling liquid fertilizers, from storage tanks to field applicators, as well as many other lines of equipment such as conveyors, industrial trucks, tanks of steel, aluminum or stainless steel, duct work, ventilators, etc. The bulletin may be secured by checking No. 6670 on the coupon and mailing it to Croplife. Please print or type name and address.

No. 5909—Bulk Storage System

The Butler Manufacturing Co. has available details of its bulk storage system for all free flowing dry granular materials. The company's bulk tanks are available in sizes from 2.1 to 34.8 ton capacities. The all-steel tanks can be served by different types of conveying equipment that includes augers, buckets, elevators, belt conveyors and pneumatic fillers. Check No. 5909 on the coupon and mail it to this publication. Please print or type name and address.

No. 6667—Hydraulic Drum Lift

The Sterling, Fleischman Co. announces the production of its new model CP-1 hydraulic drum lift for controlled pouring. Company officials say that the unit's gear reducer control device is completely enclosed and assures self-locking and absolute control at any pouring angle. The unit is designed to handle 55-gal. drums and can be adapted to handle other sizes in steel or fibre drums on special order. The lifting capacity is 750 lb. and the lifting height is 70 in. Check No. 6667 on the coupon to secure details.

Retzloff Chemical Appoints Five New Sales Representatives

ALMEDA, TEXAS — Retzloff Chemical Co. here has announced the following assignments of sales representatives for its agrichemical emulsifiers:

Industrial Chemical Co., Issaquah, Wash., will serve Washington, Oregon and Western Idaho. F. M. Speekman Co., San Francisco, will serve northern California. W. G. Wunderly, Pasadena, Cal., will serve southern California. Vulcan Sales Co., Mission, Kansas, will serve Iowa, Kansas, Missouri, Nebraska and Oklahoma. Hukill Chemical Co., Cleveland, will serve Ohio, southern Michigan and western Pennsylvania.

Latane Lamb, sales manager of the Texas surfactant producing firm, stated that this is the first move to extend the present marketing area of Texas and the Delta states.

WEED MEETING

(Continued from page 1)

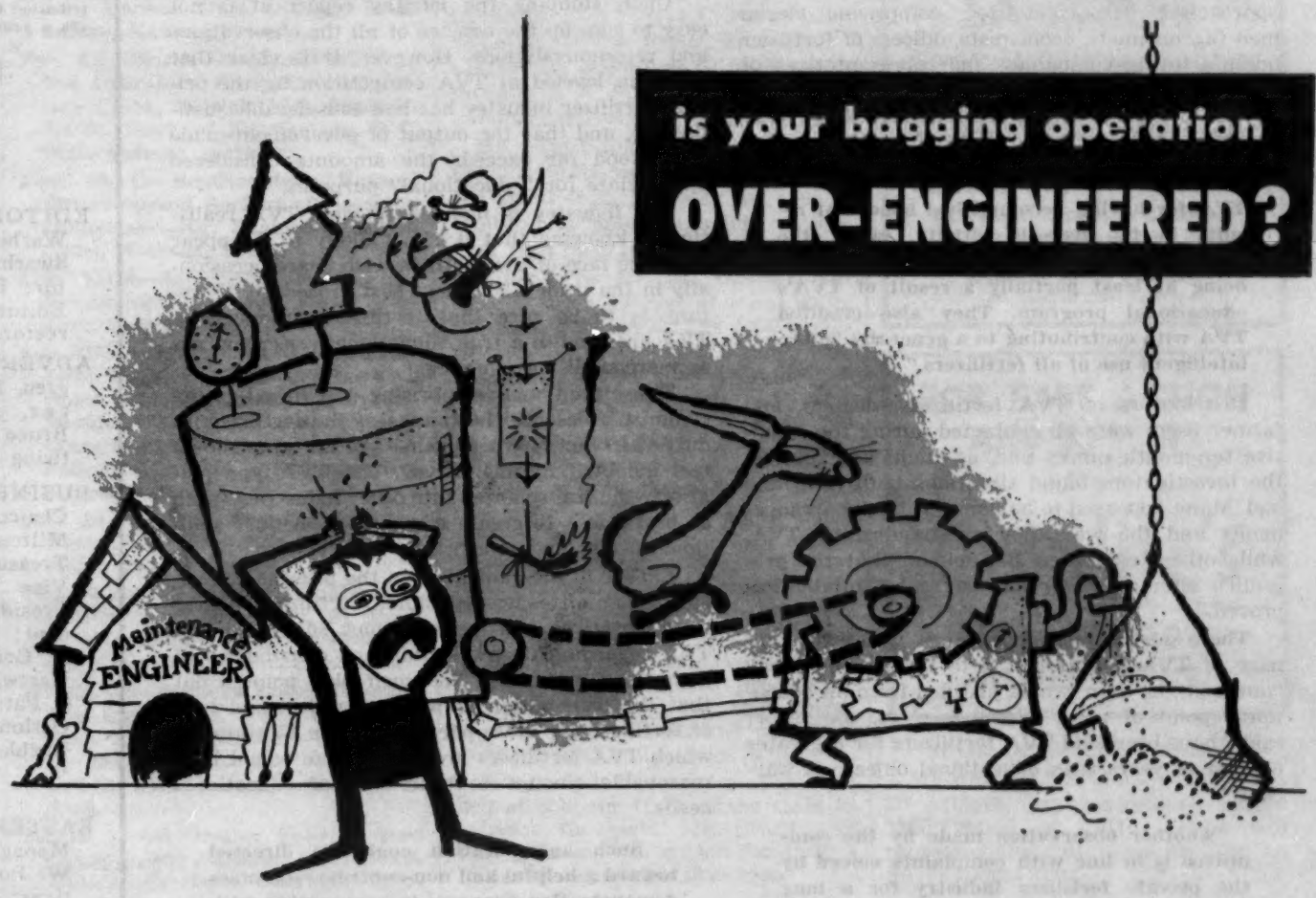
or consumer; laws pertaining to doing business in general "under which herbicide manufacturers and dealers must labor"; laws primarily aimed at the manufacturer or seller involving labeling and toxicity and claims of the product; laws of direct concern to the grower, and custom applicator laws.

He cited as the most recent statutory limitations those created by the Miller Pesticide Residue Amendment of 1954. He noted that although it did not change the basic Food, Drug & Cosmetic Act of 1938, it "brought full implication of the act to herbicide manufacturers and research workers in the weed control field." It "provided a more workable method to determine safe levels of residues that may remain when pesticides are used for food and feed products," he said.

The address referred to specific herbicides and covered procedures involved in setting "tolerances and acceptable residue levels. Referring to his original assignment of an address on "The Current Status of Herbicide Registration," Mr. Dreessen stated: "I think that many of you will agree that there is too much 'status of confusion.' I think that this has come about through the lack of good communication between registration and control officials on the one hand, and the researcher on the other."

HEADS SEED GROWERS

MT. VERNON, WASH. — Eugene (Red) Johnston is the new general manager of Associated Seed Growers, Inc., of this city. He is a graduate in horticulture from Washington State College and has moved here from Seattle where he had been production manager of the Charles H. Lilly Co.



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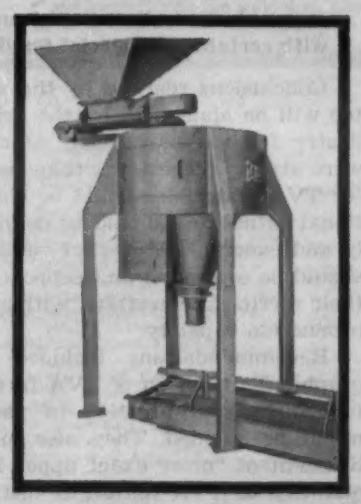

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COMMITTEE SUGGESTS . . .

Cut TVA Fertilizer Production to Amount Needed to Carry on Educational Program

THE over-all appraisal of the distributor-demonstration fertilizer activities of the Tennessee Valley Authority, made by an independent committee and released last week, presents a picture of TVA activities the scope of which is seldom approached. The committee, comprising eleven men (agronomists, economists, officers of fertilizer manufacturing companies, and representatives of farmer cooperatives) made an intensive investigation at all levels and arrived at significant conclusions.

In the first place, they gave credit to TVA for having accomplished beneficial results in its over-all activity, citing the trend toward higher analysis fertilizers as being at least partially a result of TVA's educational program. They also credited TVA with contributing to a generally "more intelligent use of all fertilizers."

Distributors of TVA fertilizers, dealers, and farmer users were all contacted during the intensive ten-month survey and, as might be expected, the investigators found situations both good and bad. Many appeared to be happy with the arrangements and the way they are handled by TVA, while others expressed the opinion that the program's effectiveness could be "substantially improved."

There were cases, for instance, where the tonnage of TVA fertilizer sold to farmers has been "much larger than can be justified from an educational point of view." Some farmers, the report said, "have been sold TVA fertilizers for a greater number of years than educational objectives warrant."

Another observation made by the committee is in line with complaints voiced by the private fertilizer industry for a long time: "The amount of fertilizers distributed under the program has exceeded that which can be justified solely on the basis of education." Also, the fact that the "unwarranted concentration" of TVA fertilizers in some areas "has resulted in extreme competition with certain commercial fertilizer concerns."

Conclusions reached by the surveying committee will be applauded by the private fertilizer industry for the most part. Among these findings were strong suggestions that "qualified farm uses for TVA materials should be clearly of an educational nature and should be defined more rigorously and exactly." Also, that "educational activities should be evaluated and supported on the basis of their merits in education, without regard to plant production capacity."

Recommendations included a broader geographic distribution of TVA fertilizer products so too much concentration in particular locations might be avoided. They also included the establishment of "more exact upper limits . . . for the quantity of TVA materials distributed to individual farmers." Further, they declared that limits should be established for the length of time for which a newly-developed material should be included in the program and how long an individual farmer should obtain fertilizer for a particular special use.

Finally, the point is made that "TVA should not use fertilizers in the distributor demonstration program which are inferior in quality to those commercially available to the farmer." In this connection, it is difficult for one to understand how materials below the standards set by commercial products can serve as a criterion by which fertilizers are appraised. Apparently this was difficult for committee members to understand, too.

Upon studying the lengthy report, it is not easy to sum up the essence of all the observations and recommendations. However, it is clear that criticism leveled at TVA competition by the private fertilizer industry has had considerable justification, and that the output of government-made plant food far exceeds the amounts considered appropriate for "educational" purposes.

The industry is inclined to view TVA realistically, knowing that it is not likely to disappear from the face of the earth (a wish heard occasionally in the trade). The next best procedure, therefore, is to be sure that fertilizers produced by TVA are used in a true educational sense and not as merchandising gimmicks.

The eleven men comprising the investigating committee deserve the thanks of the fertilizer industry. In fact, private business of all types should feel indebted to this survey, lest TVA-type philosophy be transplanted into other industries (such as pesticides) to create competition against additional tax-paying enterprises.

Earlier in the game, before the present investigating committee was appointed, fertilizer industry representatives had made various suggestions to TVA regarding its production and distribution of plant food materials. One such plan pointed out that the distribution of perhaps a thousand tons of fertilizer per state per year in the 35 states in which TVA fertilizers are distributed, would be a reasonable amount to take care of educational needs.

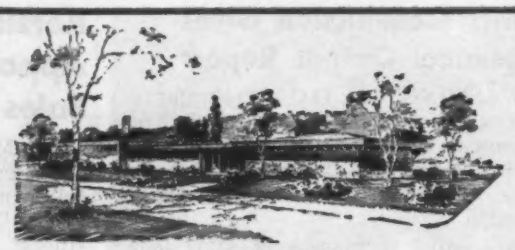
Such an operation could be directed toward a helpful and non-controversial mass demonstration program in cooperation with the farm youth of the country. A constructive and practical program of operations could be worked out at state levels between TVA and vocational agricultural leaders, or 4-H Club leaders.

With this plan in operation, involving an average of perhaps 30 counties in each state, more than 30 boys per county could each be provided with a ton of TVA fertilizer a year, which would be ample for educational and demonstrational purposes, thus falling within the usual concept of a field demonstration.

It is unlikely that the fertilizer industry would have any real criticism for such a plan of distribution, and the end results should be of value in educating future farmers on the virtues of using adequate amounts of plant food.

Quote

"Aside from the services provided by a soil testing program, a very important and useful aspect of it often remains unrecognized, or is not utilized to the fullest extent. A soil testing program provides a means in which the county agent can develop an interest on the part of the farmer in soil fertility. It is an excellent educational tool. It does much to familiarize farmers with soil fertility and, if only merely by the fact that they are exposed to it, some of it is bound to rub off. The soil testing program has been very important in educating county agents on soil fertility and proper fertilizer use as well. Every attempt has been made in Missouri to take advantage of this valuable aspect of soil testing."—**Ted Fisher, Department of Soils, University of Missouri, speaking at the Missouri Soil Fertility Short Course.**



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Croplife

BPA — *Member of Business Publications Audit*

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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG
Editor

DONALD NETH
Managing Editor

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NORTHWEST—Paul A. Anderson, Advertising Sales Representative, P.O. Box 67, Minneapolis 1, Minn. (Tel. Federal 2-0575).

WASHINGTON CORRESPONDENT — John Cipperly, 604 Hibbs Bldg., Washington, D. C. (Tel. Republic 7-8534).

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MEETING MEMOS

Jan. 23-25—Agricultural Aircraft Assn., Inc., 8th Annual Convention, Bakersfield Hacienda, Bakersfield, Cal., William D. Austin, Chandler Field, Fresno, Cal., Executive Secretary.

Jan. 24-25—New Mexico Grain & Feed Dealers Assn., LaFonda Hotel, Santa Fe, N.M., Parley G. Jensen, P.O. Box 616, Albuquerque, N.M., Assistant Secretary.

Feb. 6-7—New Mexico Pesticide Conference, New Mexico A&M College, Las Cruces, Dr. J. Gordon Watts, Chairman.

Feb. 19-20—Midwestern Chapter, National Shade Tree Conference, 13th Annual Meeting, LaSalle Hotel, Chicago, Noel B. Wysong, 536 N. Harlem Ave., River Forest, Ill., Secretary.

Feb. 26-27—Seventh Annual Ohio-Indiana Agricultural Aviation Conference, Ohio State University, Columbus, Ohio.

EDITOR'S NOTE: The listings above are appearing in the Meeting Memos for the first time this week.

Jan. 14-15—Georgia Plant Food Educational Society, Annual Meeting, University of Georgia, Athens, Ga., Fielding Reed, 710 Mortgage Guarantee Bldg., Atlanta, Ga., Secretary-Treasurer.

Jan. 14-16—Nebraska Fertilizer, Machinery and Chemical Exposition, Sponsored by the Nebraska Fertilizer Institute with the Nebraska College of Agriculture, Pershing Auditorium, Lincoln, Neb.

Jan. 20-21—Pest-O-Rama, sponsored by the Alabama Association for Control of Economic Pests, Coliseum, Montgomery, Ala., W. G. Eden, P.O. Box 626, Montgomery, Ala., Secretary-Treasurer.

Jan. 20-29—Virginia Polytechnic Institute Fertilizer Schools; at Culpeper Jan. 20, Tappahannock Jan. 21, Richmond Jan. 22, South Boston Jan. 23, Lexington Jan. 24, Marion Jan. 27 and Suffolk Jan. 29.

Jan. 21-22 — Michigan Insecticide & Fungicide Conference, Kellogg Center, Michigan State University, East Lansing, Mich.

Jan. 21-22—North Carolina Pesticide School, College Union Bldg., North Carolina State College, Raleigh.

Jan. 21-22—Illinois Fertilizer Industry Conference, University of Illinois, Urbana, Ill.

Jan. 21-23—California Weed Conference, San Jose, Cal.

Jan. 22—Minnesota Aircraft Sprayers Short Course, University of Minnesota, St. Paul campus.

Jan. 22—Oregon Fertilizer Dealers Day, Oregon State College, Corvallis, Ore.

Jan. 22-23—Northwest Agricultural Chemicals Industry conference, Hotel Benson, Portland, Ore. (In connection with N.W. Vegetable Insect Conference and Western Cooperative Spray Project.)

Jan. 23-24—Tenth Illinois Custom Operators School, University of Illinois, Urbana.

Jan. 27-31—Seventh Annual Oregon Chemical Applicators Short Course, Withycombe Hall, Oregon State College, Corvallis, Ore.

Jan. 30-31—Colorado Agricultural Chemicals Assn., Annual Meeting, Cosmopolitan Hotel, Denver.

Feb. 2-4—New York Garden Supply Show, New York Coliseum, New York City.

Feb. 4-5—Kansas Insect & Weed Control Conference, Williams Auditorium, Kansas State College, Manhattan, Kansas.

Feb. 4-6—North Carolina Pest Control Operators' Short Course, College Union, Raleigh, N.C. Clyde F. Smith, Dept. of Entomology, N.C. State College, secretary.

Feb. 10-11 — Southwestern Branch, Entomological Society of America, annual meeting, Shamrock Hilton Hotel, Houston, Texas.

Feb. 12-13—Shell Chemical Corp. Nematology Workshop, Hotel Stardust, Yuma, Ariz.

Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

Feb. 20-21—Shell Chemical Corp. Nematology Workshop, Holiday Inn Motel, Toledo, Ohio.

Feb. 20-22—Nitrogen Conference, University of Minnesota, St. Paul. M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn., Chairman.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

March 13-14—Oregon Feed & Seed Dealers Assn., Annual Convention, Multnomah Hotel, Portland, Ore.

April 13-15—Sixth Annual California Fertilizer Conference, California State Polytechnic College, San Luis Obispo, Sidney H. Bierly, 475 Huntington Drive, San Marino 9, Cal., General Manager.

April 17-19—California Hay, Grain & Feed Dealers Assn., Annual Convention, Ambassador Hotel, Los Angeles.

April 22 — Western Agricultural Chemicals Assn., Spring Meeting, Hotel Biltmore, Los Angeles; C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., executive secretary.

June 9-11—Association of Southern Feed & Fertilizer Control Officials, Heart of Atlanta Motel, Atlanta, Ga., Bruce Poundstone, University of Kentucky, Lexington, Ky., Secretary-Treasurer.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 8-10—Pacific Northwest Plant Food Assn., Ninth Annual Regional Fertilizer Conference, Pocatello, Idaho.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

Oct. 22-24—Pacific Northwest Plant Food Assn., Annual Meeting, Gearhart, Ore., Leon S. Jackson, P.O. Box 4628, Sellwood-Moreland Station, Portland, Ore., secretary.

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Texas Growers Get 5.11 Bale Cotton Yield

LUBBOCK, TEXAS — Remarkable fertilization results have been achieved on the Pruitt Farms near Clarksville, according to information given by J. W. Pruitt at a recent irrigation conference in Lubbock.

Mr. Pruitt told the group how he and his brothers had increased cotton yields from 1.9 bales per acre in 1950 to 5.11 bales to the acre in 1956.

In 1950 they applied 70 lb. of nitrogen per acre. In 1951 this was increased to an average of about 80 lb. for a 2.2-bale yield. The 1952 application was around 100 lb. and produced 2.8 bales per acre. In 1953 it was 140 lb. of nitrogen for 3.3 bales; in 1954 a 150 lb. application helped make 4.21 bales, and the same amount was used the next year for a yield of 4.46 bales to the acre.

In 1956 the Pruitt brothers added another 50 lb. to the acre for a 200-lb. total of nitrogen. When the last boll was picked, the Pruitts found they had made 5.11 bales to the acre, which is possibly a world's record.

Though fertilizer was credited with much of the increased production, Mr. Pruitt pointed out that better farming practices and irrigation methods also had a part in it.

More rigid insect control also helped hold the fruit on the stalk to increase the yield. Mr. Pruitt said they poisoned the cotton for insects 18 times during the 1956 crop.

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Earnie will greet American Farmers from the road-sides on dozens of distinctive, strategically located billboards.

AND AT THEIR ELEPHANT BRAND DEALER

They'll find Earnie here, too, ready to help complete the sale with wall cards, pamphlets, samples and other dealer aids . . . selling *more* Elephant Brand this year than ever before!

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